Water Utility Enterprise Report

Final



September 2002

Santa Clara Valley Water District



Santa Clara Valley Water District

5750 ALMADEN EXPWY
SAN JOSE, CA 95118-3614
TELEPHONE (408) 265-2600
FACSIMILE (408) 266-0271
www.valleywater.org
AN EQUAL OPPORTUNITY EMPLOYER

September 30, 2002

Dear Board Members:

The *Water Utility Enterprise Report, Final, September 2002* presents the financial and water supply information that forms the basis for the adopted water rates for fiscal year 2002–03. This report updates information provided in the preliminary report, which was filed in April, as required by the Santa Clara Valley Water District Act.

The Water Utility's adopted rates for fiscal year 2002–03 are necessary to fully support the Board's Ends Policy 2.1, which states: "There is a reliable supply of healthy, clean drinking water." The adopted rates are the foundation for the District's plans to meet current and projected water demands. Two recent developments reinforced the need for the increase in groundwater rates that were adopted for the coming fiscal year. First, after September 11, 2001, additional security measures were implemented to protect key water supply facilities, resulting in an additional annual cost. Second, electricity rate increases instituted in 2001 by the California Public Utilities Commission increased operating costs $3 million annually. While external factors have required these new expenditures, staff is also working to contain costs and improve efficiency by instituting performance measures at all levels of the organization.

The rates adopted for fiscal year 2002–03 are consistent with the long-term projections made in 1998. The adopted North County Municipal and Industrial rate for groundwater will increase by 3.0 percent from $330 per acre-foot to $340 per acre-foot. The adopted South County Municipal and Industrial rate will increase by 7.7 percent from $130 per acre-foot to $140 per acre-foot. Corresponding rates for agricultural water were adopted at $34 per acre-foot in North County and $14 per acre-foot in South County. Growers who utilize the District's Mobile Lab Program to improve irrigation efficiency are eligible for reduction of $1.50 per acre-foot from the basic agricultural rate.

The Board adopted staff recommendations to maintain the surcharge rates for contract and non-contract treated water at the levels adopted in fiscal year 2001–02. The surcharge on treated water scheduled for delivery under the contracts with retail agencies was adopted at $80 per acre-foot. The surcharge on treated water delivered in excess of scheduled contract amounts from Rinconada Water Treatment Plant was continued at $20 per acre-foot.

The attached report includes historical data on District water supply and demand, describes the benefits of the District's activities, and provides financial projections for the next ten years.

Sincerely,

Stanley M. Williams
Chief Executive Officer

jr:mf
0826c-l.doc

SANTA CLARA VALLEY WATER DISTRICT
LIBRARY
5750 ALMADEN EXPRESSWAY
SAN JOSE, CALIFORNIA 95118

TD225383 W42002C.2

WATER UTILITY ENTERPRISE REPORT

FINAL

SANTA CLARA VALLEY WATER DISTRICT

Prepared by

John Ryan
Special Programs Administrator

Linda Louie
Assistant Engineer

Debbie Avina
Office Specialist

Under the Direction of

Walt Wadlow
Chief Operating Officer

SEPTEMBER 2002

DISTRICT BOARD OF DIRECTORS

Rosemary C. Kamei, Chair	**District 1**	**Gregory A. Zlotnick**	**District 5**
Joe Judge, Vice Chair	**District 2**	**Tony Estremera**	**At Large**
Richard P. Santos	**District 3**	**Sig Sanchez**	**At Large**
Larry Wilson	**District 4**		

PREFACE

This is the 31st annual report on the status of the Santa Clara Valley Water District's (District) Water Utility Enterprise. In accordance with Section 26.5 of the District Act, the District annually prepares a written report on its activities to protect and augment its water supplies. As required by the District Act, this report provides information on the present and future water requirements of Santa Clara County (County), the water supply available to the District, future capital improvement and maintenance and operating requirements, financing methods, and the water charges by zone for agricultural water and nonagricultural water

ACRONYMS

AF	Acre Feet
AG	Agricultural
BMP	Best Management Practices
CAA	Clean Air Act
CIP	Capital Improvement Plan
CVP	Central Valley Project
CVPIA	Central Valley Water Project Improvement Act
CWA	Clean Water Act
DWR	Department of Water Resources
EPA	Environmental Protection Agency
ESA	Endangered Species Act
EWA	Environmental Water Account
FAHCE	Fisheries and Aquatic Habitat Collaborative Effort
FPEIR/S	Final Programmatic Environmental Impact Report/Statement
FY	Fiscal Year
HAZMAT	Hazardous Materials
ISMP	Information Systems Management Plan
IWRP	Integrated Water Resources Plan
LTA	Long-term average
M&I	Municipal and Industrial
MTBE	Methyl Tert-Butyl Ether
PPB	Parts Per Billion
PWTP	Penitencia Water Treatment Plant
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board
RWTP	Rinconada Water Treatment Plant
SBWRP	South Bay Water Recycling Program
SCRWA	South County Regional Wastewater Authority
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SDWA	Safe Drinking Water Act
SFWD	San Francisco Water District
STWTP	Santa Teresa Water Treatment Plant
SWP	State Water Project
T&D	Transmission and Distribution
ULFT	Ultra-low-flush Toilets
UST	Underground Storage Tank
WET	Water Efficient Technologies
WMI	Watershed Management Initiative
WTP	Water Treatment Plant

TABLE OF CONTENTS

Page

I. ADOPTED WATER RATES AND SUMMARY 1

INTRODUCTION 1
ADOPTED WATER RATES FOR FISCAL YEAR 2002–03 1
SUMMARY 3
Section II 3
Section III 3
Section IV 3

II. SANTA CLARA COUNTY WATER REQUIREMENTS AND SUPPLIES 5

LONG-TERM WATER USE TRENDS 5
LONG-TERM WATER SUPPLY OUTLOOK 5
DISTRICT WATER SUPPLIES AND USE 6
Recorded Operation for Calendar Year 2000 9
Recorded Operation for Calendar Year 2001 11
Projected Operation Plan for Calendar Year 2002 11
Banking and Reallocations 12

III. BENEFITS AND SERVICES PROVIDED BY THE DISTRICT 15

OVERALL RESOURCE MANAGEMENT 15
Long-Term Planning for Water Supply 15
Stream and Watershed Management 15
Flood Protection and Stream Stewardship Program 16
Hydrologic Data Management 17
Government Relations 17
Public Information and Education 17
WATER SUPPLY AUGMENTATION 17
Managing Groundwater Recharge 18
Surface Water Transportation and Storage 19
Imported Water 19
Resolution of Bay-Delta Issues: (CALFED Bay-Delta Program) 19
Banking Available Supplies for Future Use 20
Managing Central Valley Project Contract Issues 20
Water Use Efficiency: Conservation 21
Water Use Efficiency: Water Recycling Partnerships and Assistance 23
WATER QUALITY PROTECTION 23
Treated Water Operations 23
Capital Improvements at the Water Treatment Plants 24
Resource Protection 24
Methyl Tert-Butyl Ether (MTBE) 25
Nitrate Management 26
Groundwater Guardian 27
Underground Storage Tank Fuel Cleanup Program 27
Well Ordinance Program 27
HAZMAT Emergency Response Program 28
Urban Runoff Program 28
CAPITAL IMPROVEMENTS 28

Page

IV. FINANCIAL OUTLOOK FOR THE WATER UTILITY ENTERPRISE 31
INTRODUCTION 31
REVIEW OF DISTRICT'S FINANCES FOR FISCAL YEARS 2000–01, 2001–02, AND 2002–03 31
Fiscal Year 2000–01 32
Fiscal Year 2001–02 32
Fiscal Year 2002–03 33
OVERVIEW OF LONG-TERM CAPITAL AND OPERATING PLANS 34
LONG-TERM FUNDING APPROACH FOR THE WATER UTILITY 35
NORTH COUNTY (ZONE W-2) FINANCES 38
SOUTH COUNTY (ZONE W-5) FINANCES 40

TABLES

Page

TABLE 1-1 SUMMARY OF WATER CHARGES 2

TABLE 2-1 WATER USE FOR CALENDAR YEARS 2000 THROUGH 2002 9

TABLE 2-2 ANNUAL WATER SUPPLY AND DISTRIBUTION FOR CALENDAR YEARS 2000 THROUGH 2002 (ACRE-FEET) SANTA CLARA COUNTY 10

TABLE 2-3 DISTRICT WATER BANKING FOR CALENDAR YEARS 2000 THROUGH 2002 .. 13

TABLE 3-1 CAPITAL IMPROVEMENT PROJECTS - FISCAL YEARS 2001–02 THROUGH 2006–07 30

TABLE 4-1 OVERVIEW OF WATER UTILITY REVENUE REQUIREMENTS 32

TABLE 4-2 CAPITAL IMPROVEMENT PROJECTS FUNDING SOURCES - FISCAL YEARS 2001–02 THROUGH 2006–07 35

TABLE 4-3 TEN-YEAR WATER UTILITY PLAN 37

TABLE 4-4 OVERVIEW OF NORTH COUNTY FINANCES 38

TABLE 4-5 OVERVIEW OF SOUTH COUNTY FINANCES 41

FIGURES

FIGURE 1-1 TEN-YEAR RATE PROJECTION 4

FIGURE 2-1 NORTH SANTA CLARA COUNTY WATER USE ZONE W-2 7

FIGURE 2-2 SOUTH SANTA CLARA COUNTY WATER USE ZONE W-5 7

FIGURE 2-3 NORTH SANTA CLARA COUNTY WATER SUPPLY ZONE W-2 8

FIGURE 2-4 NORTH SANTA CLARA COUNTY WATER SUPPLY ZONE W-5 8

FIGURE 3-1 NORTH SANTA CLARA COUNTY WATER SUPPLY ZONE W-2 21

FIGURE 4-1 TEN-YEAR PROGRAM – PROJECTED EXPENDITURE 34

FIGURE 4-2 TEN-YEAR RATE PROJECTION 36

FIGURE 4-3 FISCAL YEAR 2002–03 NORTH COUNTY WATER UTILITY PROGRAM REQUIREMENTS AND FINANCING SOURCES 39

FIGURE 4-4 FISCAL YEAR 2002–03 SOUTH COUNTY WATER UTILITY PROGRAM REQUIREMENTS AND FINANCING SOURCES 41

APPENDICES

Page

APPENDIX A
WATER UTILITY RATE COMPONENTS AND ADOPTED RATES

TABLE A-1 ADOPTED WATER RATE COMPONENTS FOR FISCAL YEAR 2002–03 ..A-1

TABLE A-2 ADOPTED WATER CHARGES FOR FISCAL YEAR 2002–03 .....A-2

APPENDIX B
DESCRIPTION OF WATER UTILITY REVENUE SOURCES, COST CENTERS, AND RESERVES

PRICING POLICY.....B-1

WATER CHARGES B-1

PROPERTY TAXES B-1

DEBT FINANCING B-1

WATER UTILITY RESERVES B-2

WATER UTILITY ZONES B-2

WATER UTILITY COST CENTERS.....B-3

RESOLUTION 99-21 .....B-4

FUND BALANCE RESERVE POLICY B-6

APPENDIX C
MAPS

WATER CONVEYANCE, TREATMENT, AND DISTRIBUTION SYSTEM C-1

WATER UTILITY ZONES C-2

GROUNDWATER SUBBASINS AND MAJOR RECHARGE SYSTEMS C-3

I. ADOPTED WATER RATES AND SUMMARY

INTRODUCTION

The Santa Clara Valley Water District (District) is the water resource management agency that provides a safe and reliable water supply to the County's 1.7 million residents. The District's Water Utility budget and rate strategies for fiscal year (FY) 2002–03 are designed to provide revenues to pay the full cost of the County's water supply and to maintain fisheries, water quality, and other beneficial uses. The District continues to support water conservation and water recycling activities to moderate demands for additional water supplies.

The District's major sources of revenue are from the imposition of charges on groundwater and from contracts for the sale of treated surface water produced by its three treatment plants. The District is required by State law to assess the need for groundwater charges annually and to prepare this report to describe the activities undertaken to provide a water supply, along with the associated capital, maintenance, and operating requirements. The report must also describe the financing methods and recommended water charges for zones of use the District Board of Directors establishes.

This introductory section summarizes Water Utility rates adopted for FY 2002–03 and Sections I, III and IV. Details of the rate components and other charges are presented in Appendix A.

ADOPTED WATER RATES FOR FISCAL YEAR 2002–03

In 1998, the District conducted an extensive analysis of the long-term capital and operating needs of the Water Utility and prepared a ten-year projection of the water rates and revenue bond financing that would be necessary to provide a reliable, high-quality water supply to the County. Alternative rate projections were discussed extensively with the water retailers, and a decision was reached to begin a series of rate increases, expected to lead to rates 50 percent above the 1998 level by 2004 (see Section IV).

Table 1-1 shows the water rates in fiscal years 1999–00, 2000–01, and 2001–02. The final column contains the adopted rates for FY 2002–03, which are in accordance with the pricing policy exhibited in Appendix B.

In FY 1998–99, the rates for North County, Water Charge Zone W-2, were increased for the first time since July 1991 for municipal and industrial (M&I) water. The South County, Water Charge Zone W-5, M&I rate did not change until FY 1999–00 (the boundaries of Zones W-2 and W-5 are shown on the Water Utility Zones map in Appendix C). As shown in Table 1-1, the groundwater charge for M&I water in the North County was raised to $330 per acre feet (AF) for the 2001–02 fiscal year. The Board adopted staff recommendations to continue along the path of rate increases projected in 1998 and increasing the groundwater charge for M&I water in the North County to $340 per AF for FY 2002–03.

Electric power costs and security are two factors that contribute to the need for higher rates in FY 2002–03. As a result of shortages in California's electric power markets, electricity rates increased in June 2001, requiring an additional $3 million annually to bring water into the

County and to operate pumping stations and water treatment plants. Subsequent to September 11, 2001, the District beefed up its security procedures to include 24-hour surveillance at key facilities. Additional security costs of $1.5 million translate into an average of $5.00 for each AF of water to be provided by the District in FY 2002–03.

For South County, the Board adopted staff recommendations to increase the groundwater charge for M&I water to $140 per AF for FY 2002–03. In recent years, Board policy has been to set the rates for agricultural water at 10 percent of the M&I rates, and for FY 2002–03, the Board adopted rates to adhere to this policy in each of the zones.

The surcharge on treated water delivered under the contracts with retail agencies was adopted to remain at $80 per AF to cover the increased costs of power and chemicals. The District has the discretion to make available treated water in excess of the retailers' basic contract amounts, so-called noncontract treated water, "... at such times and such prices as determined by the District." The availability of noncontract deliveries will be suspended when necessary to accommodate construction activities scheduled for Rinconada Water Treatment Plant (RWTP). The amount of the surcharge on noncontract water affects the retailers' decisions on whether to pump groundwater or purchase treated water. For FY 2002–03, the Board continued the surcharge on noncontract water from RWTP at $20 per AF. Holding the noncontract surcharge at $20 per AF is expected to encourage the retailers to use treated water. This will help maintain groundwater storage, while making use of available imported water supplies.

TABLE 1-1
Summary of Water Charges

(Dollars Per Acre-Foot, $/AF)

	1999–00	2000–01	2001–02	Adopted 2002–03
Zone W-2 (North County)				
Basic User Charge	285.00	310.00	330.00	340.00
Treated Water Surcharge				
Contract	70.00	70.00	80.00	80.00
Noncontract*	0.00	0.00	20.00	20.00
Zone W-2 (North County)				
Total Treated Water Charge				
Contract	355.00	380.00	410.00	420.00
Noncontract*	285.00	310.00	350.00	360.00
Zone W-2 (North County)				
Groundwater Charge				
Municipal & Industrial	285.00	310.00	330.00	340.00
Agricultural	28.50	31.00	33.00	34.00
Net Agricultural (With Mobile Lab Rebate)			31.50	31.50
Zone W-5 (South County)				
Groundwater Charge				
Municipal & Industrial	115.00	115.00	130.00	140.00
Agricultural	11.50	11.50	13.00	14.00
Net Agricultural (With Mobile Lab Rebate)			11.50	11.50

Note: Treated water is provided only in Zone W-2; the total charge adopted for contract treated water is the sum of $340 plus $80 or $420 per AF. Non-contract water will be available only from the Rinconada Water Treatment Plant in FY 2002–03, but non-contract deliveries will likely be limited during future construction periods.

SUMMARY

Section II

Section II presents data on the County's water supply and water usage. Water supply records indicate an increasing trend over the past three calendar years, 2000 through 2002. Water use in calendar years 2000 and 2001 was relatively consistent. In 2000, water usage was recorded at 383,300 AF, and in 2001, at 383,400 AF. Water use in 2002 is projected to be 2.3 percent higher at 392,300 AF.

Section III

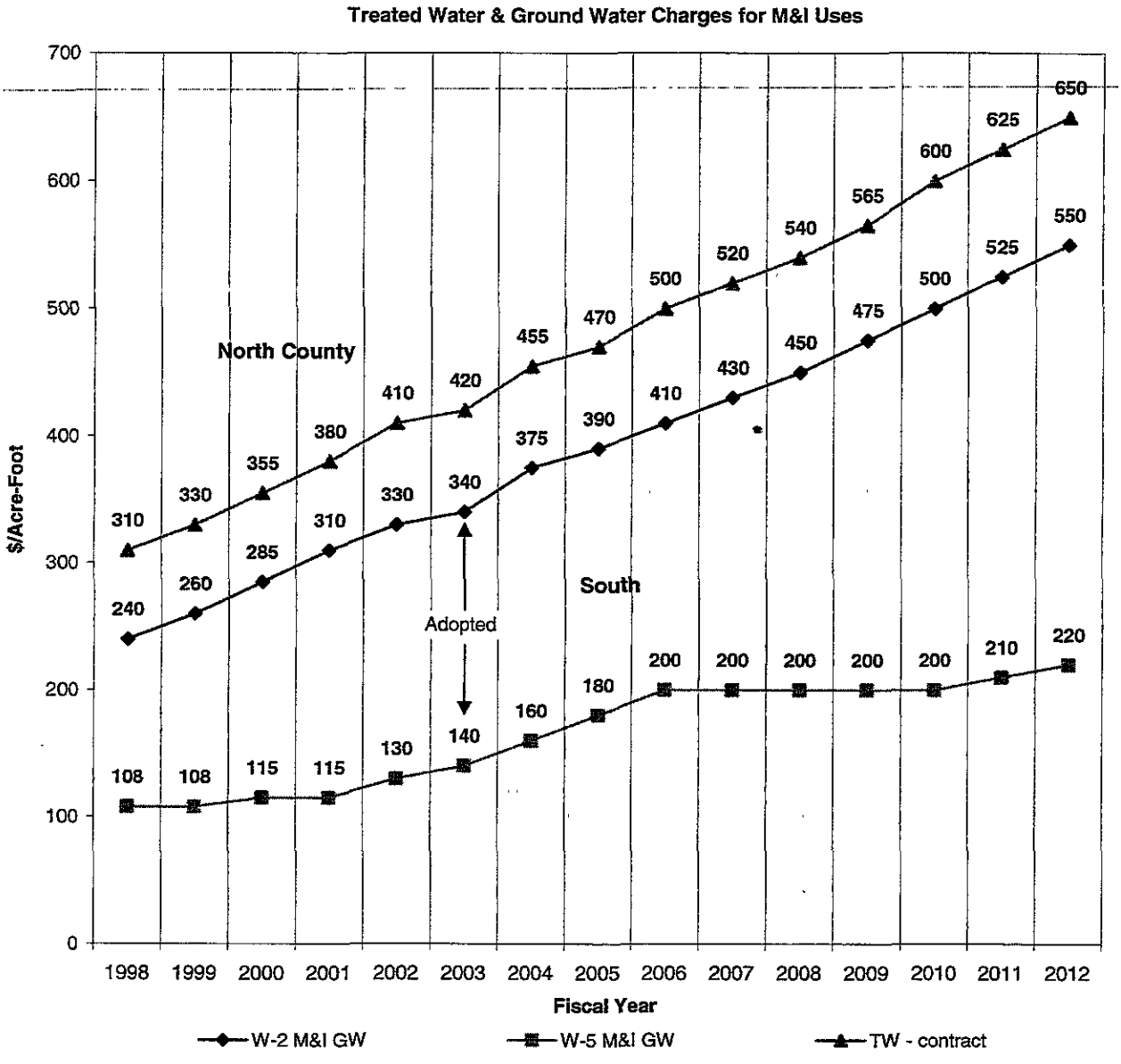
Section III describes water supply and quality challenges facing the Water Utility and the benefits of District activities to address them. The activities exhibit the District's continuing efforts to conserve and augment its water supplies and are the primary reason for the need for water charges. Capital projects at the forefront of the District's plans in FY 2002–03 include Recycled Water in South County, New Water Quality Laboratory, and Stage 2 of the Treated Water Improvement Projects.

Section IV

Section IV discusses the revenue required to meet needs in FY 2002–03 and describes the financial analysis for the two water charge zones. This section also includes a projection of the Water Utility finances over the next 10 years. For FY 2002–03, the District will see higher water rates resulting primarily from increased operating costs related to electricity and security costs, as well as increased capital costs related to the New Water Quality Laboratory and Stage 2 Treated Water Improvement construction at Santa Teresa and Penitencia Water Treatment Plants. The overall revenue requirement for FY 2002–03 is projected to be $217.5 million. The Water Utility program requirements will be met from a combination of current revenues, reserves, and debt.

As illustrated in the following figure, water rates are currently anticipated to increase 62 percent between FY 2002–03 and FY 2011–12. This degree of increase is much steeper than the water rates recorded over the previous ten years, FY 1992–93 and FY 2001–02. The percent increase over that time span was 26 percent. The total incremental revenue between FY 2001–02 and FY 2010–11 will be used to fund increased operating costs driven by additional state and federal water and additional water treatment costs. Higher rates are also needed to pay debt service on capital expenditures currently underway and future construction at reservoirs and water treatment plants.

FIGURE 1-1
Ten- Year Rate Projection



II. SANTA CLARA COUNTY WATER REQUIREMENTS AND SUPPLIES

LONG-TERM WATER USE TRENDS

Water use in the County is categorized as either agricultural or M&I. Recorded North County water use since FY 1964–65 and South County water use since FY 1987–88 (when the District merged with Gavilan Water Conservation District) is shown in Figures 2-1 and 2-2, respectively. Metcalf Road is the dividing line between North County Zone W-2 and South County Zone W-5 (see map of Water Utility Zones in Appendix C).

Water use in North County, as shown in Figure 2-1, is predominantly M&I. Current projections from the Integrated Water Resources Plan (IWRP) indicate an increase in M&I use through 2020, when the North County annual M&I water use is projected to be 354,000 AF. Agricultural water use is expected to be approximately 1,000 AF per year by the year 2020 in North County, or less than one percent of the total North County water use.

In South County, it is anticipated that M&I water use will continue to increase while agricultural use is expected to decline to approximately 27,000 AF by 2020 (see Figure 2-2). The latest projections for South County anticipate total water use of about 72,000 AF by the year 2020. M&I and agricultural water uses are projected to be 45,000 AF and 27,000 AF that year, respectively.

The projected water usage for the County discussed above totals 427,000 AF in 2020. This represents the likely outcome of many factors, including population trends, employment growth, *water conservation practices, and plumbing code changes. Alternative population and* economic assumptions could lead to total County water needs ranging from as low as 416,000 AF to as high as 478,000 AF in 2020.

The drought and economic downturn during the early 1990s drove a decrease in the County water use from 1987 to 1991. District records show the total per capita water use was 231 gallons per day in 1988. By 1991, the per capita use dropped steadily to 171 gallons per day. Once drought conditions and the economic recession eased, the County began a general upward trend in water consumption from 1992 to 1997. For this time period, the per capita water use gradually increased from 182 gallons per day to 210 gallons per day. Water use dropped to 185 gallons per capita per day in 1998 due in part to unusually wet weather early in the year, which helped reduce demand for water used in agriculture and landscaping. Since 1998, per capita water use gradually increased to 198 gallons per day in 2001.

LONG-TERM WATER SUPPLY OUTLOOK

The District's water supply includes water imported from the Sacramento-San Joaquin Delta, local water stored in reservoirs and groundwater subbasins, water banked in San Joaquin Valley, and recycled water. The Santa Clara groundwater subbasin is in the North County, while both the Coyote and Llagas groundwater subbasins are in South County (see Groundwater Subbasins and Major Recharge Systems Map in Appendix C).

Sources of water supply in North County consist of locally developed water, recycled water, and water imported via the State Water Project (SWP), the Federal Central Valley Project (CVP),

and the City and County of San Francisco's Bay Division Pipelines (Hetch Hetchy). South County is supplied by locally developed water, recycled water, and CVP water imported via the San Felipe Division. The recorded water supply in North County since FY 1964–65 is shown in Figure 2-3, and South County since FY 1987–88 is shown in Figure 2-4. Projected supplies of local, recycled and imported water are shown to the year 2020. Projected supply availability figures are based on the long term average (LTA) supply projections to the year 2020 presented in the District's ongoing IWRP. As can be seen in the historical data, the District is often unable to use all of the imported water available in a year.

In working toward ensuring a reliable future water supply, the District is engaged in several activities. Within the County, the District continues its conjunctive use program of recharging surface water to augment groundwater supplies. Additionally, the District is providing financial incentives to wastewater agencies for delivery of recycled water for nonpotable uses and has signed a partnership agreement with the City of San Jose to explore the future development of recycled water. Future local supplies are projected to be augmented by nonpotable water from recycled water facilities in San Jose, Sunnyvale, and the South County Regional Wastewater Authority (SCRWA) serving Gilroy and Morgan Hill.

The District, along with numerous other urban water agencies, is participating in the statewide Water Conservation Memorandum of Understanding to implement 16 urban water use best management practices (BMP). In addition, the District manages urban water use conservation programs beyond the BMPs and is implementing agriculture water conservation practices as required under the CVP Improvement Act (CVPIA). These activities are more fully described in Section III, Benefits and Services Provided by the District.

DISTRICT WATER SUPPLIES AND USE

The following tables show calendar year activities for 2000 and 2001 and the plan for calendar year 2002 reservoir operations, raw water conveyance, treated water production, and groundwater recharge. Table 2-1 summarizes water use recorded and projected in the County for calendar years 2000, 2001 and 2002. Table 2-2 documents District and non-District annual water supply and distribution management activities, and Table 2-3 summarizes District out-of-county water banking activities for those three years. The differences between Tables 2-1 and 2-2 can be accounted for by changes in surface water and groundwater storage. Moreover, Table 2-2 summarizes only those supplies managed by the District or other agencies. The groundwater basin is also replenished by naturally occurring recharge in areas not managed by the District or others.

FIGURE 2-1
North Santa Clara County Water Use
Zone W-2

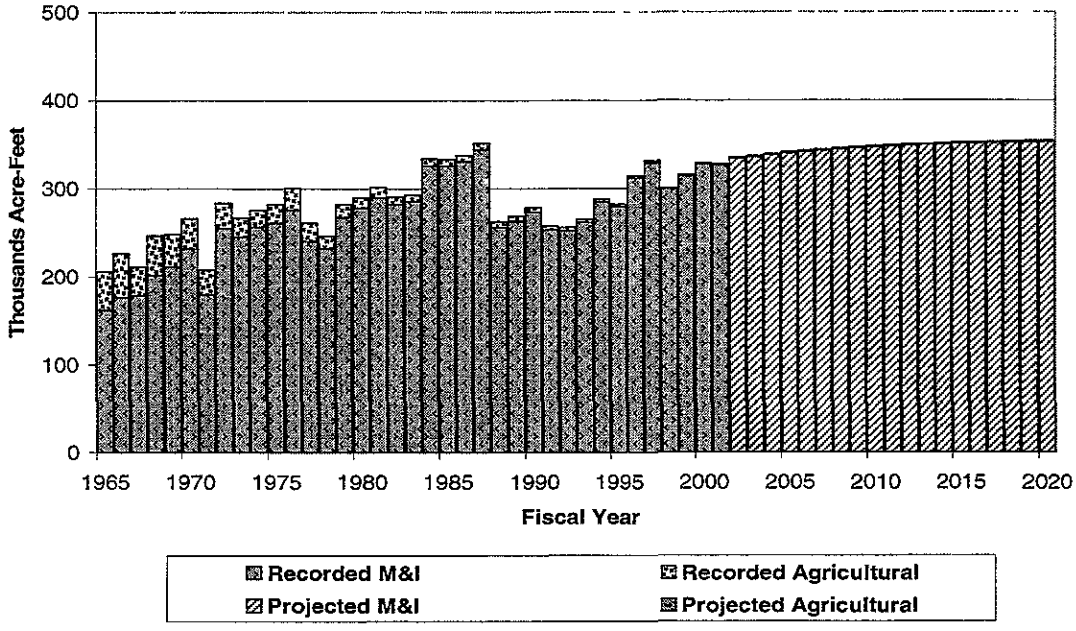


FIGURE 2-2
South Santa Clara County Water Use
Zone W-5

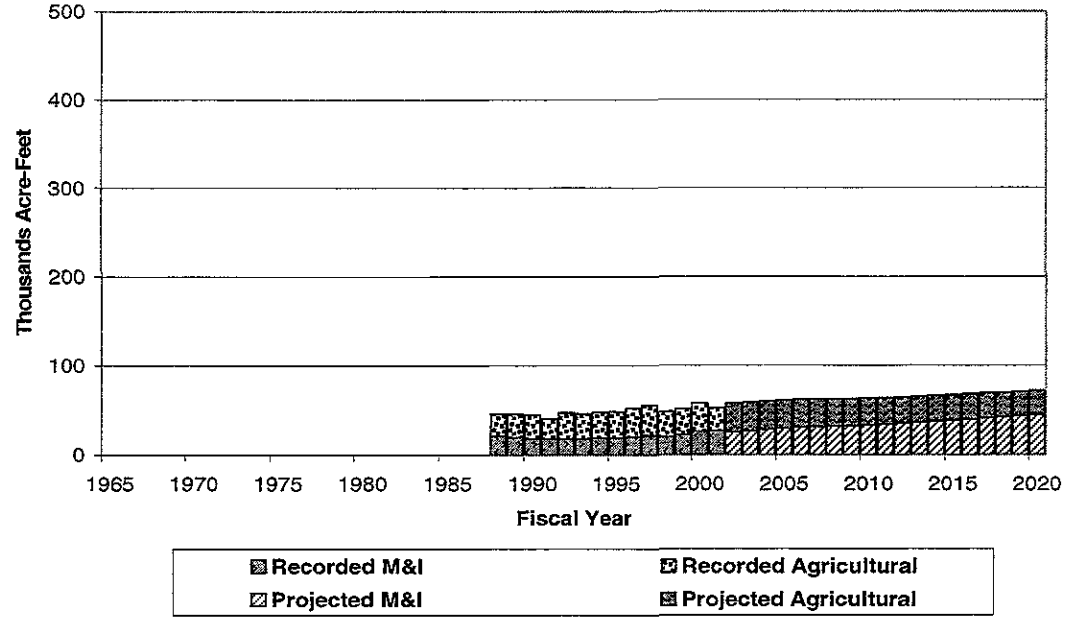


FIGURE 2-3
North Santa Clara County Water Supply
Zone W-2

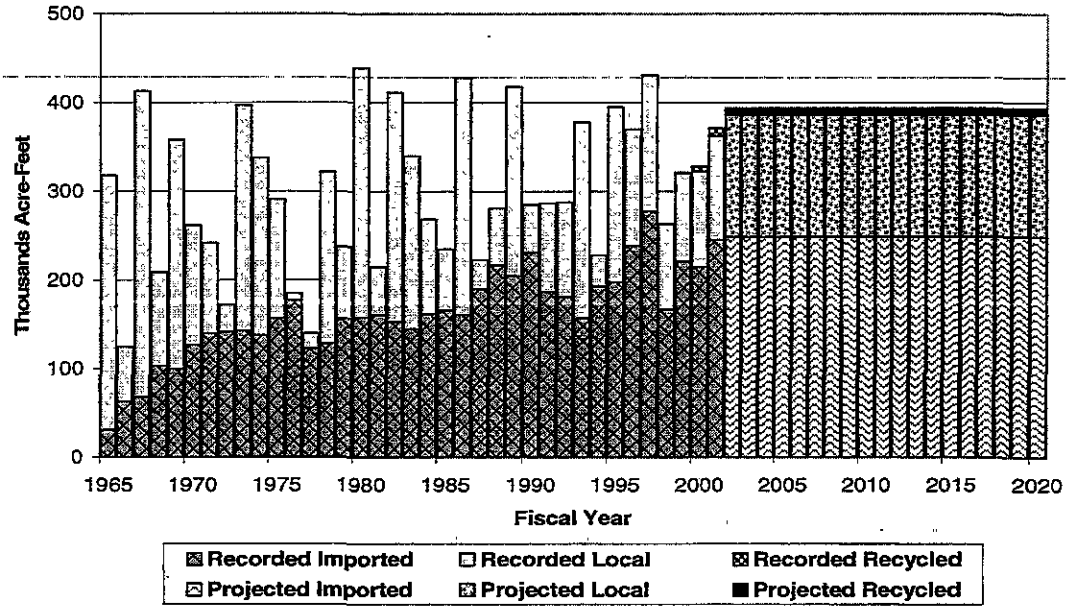
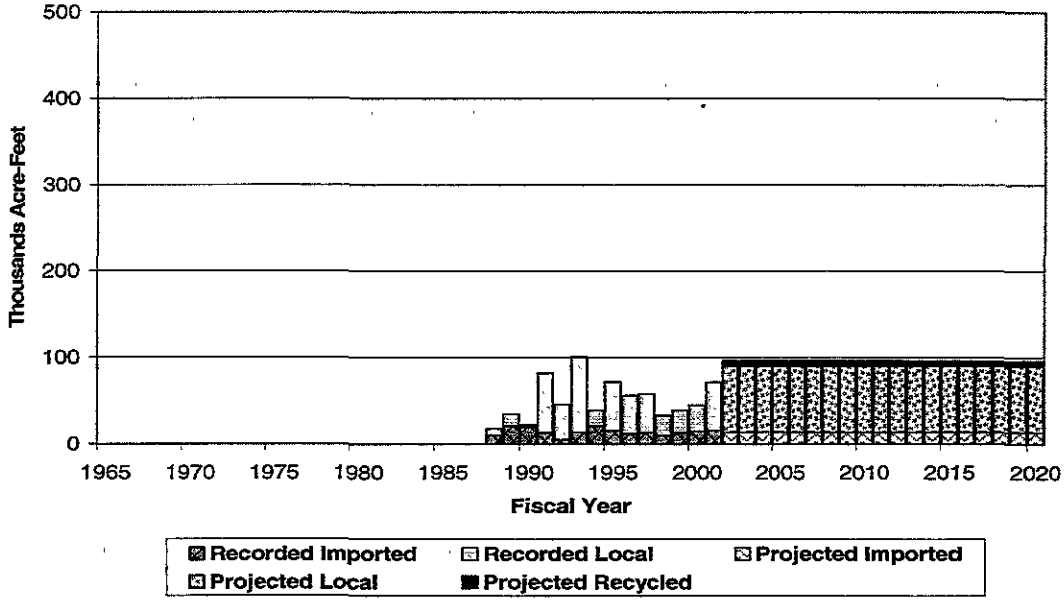


FIGURE 2-4
South Santa Clara County Water Supply
Zone W-5



Note: North and South County projected supply *availability* figures are based on the long term average (LTA) supply projections to the year 2020 presented in the District's ongoing January 1997 Integrated Water Resources Plan (IWRP). Recorded supply figures reflect the amounts of supply *taken*. Supplies *taken* are often less than the supplies *available*. On average, records show that between 1992 and 2001, 89 percent of the SWP LTA water has been taken. In this same time period, an average of 72 percent of the CVP LTA has been taken.

TABLE 2-1
Water Use for Calendar Years 2000 Through 2002 (Acre-Feet)
Santa Clara County

	Actual 2000	Actual 2001	Projected 2002
I. WATER PRODUCTION			
In-District Groundwater Pumping	163,900	169,200	170,700
District Treated Water	129,700	131,200	132,500
District Surface Water Irrigation	5,700	3,100	3,000
Recycled Water	900	600	600
Non-District (Import, Local, & Recycled)	83,100	79,400	85,500
TOTAL WATER PRODUCTION	**383,300**	**383,500**	**392,300**
II. WATER USE			
District Municipal & Industrial	271,000	273,900	276,900
District Agricultural	29,200	30,100	29,900
Non-District (Import, Local, & Recycled)	83,100	79,400	85,500
TOTAL WATER USE	**383,300**	**383,400**	**392,300**

Recorded Operation for Calendar Year 2000

In 2000, the total water use in the County was 383,300 AF. Rainfall in the 2000 calendar year totaled 14.25 inches in downtown San Jose, about 100 percent of average. Water use from District sources included 271,000 AF of M&I and 29,200 AF of agricultural water. Non-District use totaled 83,100 AF provided by non-District sources (Hetch Hetchy, Stanford/San Jose reservoirs, and recycled water deliveries). Of the District water used, 163,900 AF were provided through groundwater pumping, 900 AF through recycled water, and 129,700 AF were delivered from our three water treatment plants. In addition, 5,700 AF were delivered from surface waters for direct use. Table 2-1 presents a detailed look at the in-county water demand.

Table 2-2, which excludes natural recharge, depicts how the water supply was managed and distributed in 2000. The District imported approximately 169,600 AF of water from the State and Federal Water Projects, and released approximately 92,200 AF from its reservoirs for groundwater recharge or treatment in one of our three treatment plants. The remainder of the District demand was met with natural recharge or carryover storage from our groundwater basins.

TABLE 2-2
Annual Water Supply And Distribution For Calendar Years 2000 Through 2002 (Acre-Feet)
Santa Clara County

Water Supply	Actual 2000	Actual 2001	Projected 2002
I. ANNUAL WATER SUPPLY			
District Supply			
Imported Water To County			
SFWD Intertie		6,084	-
CVP Imports	91,400	150,500	129,900
State Water Project Imports	78,200	48,068	68,000
Total District Imports	169,600	204,652	197,900
Local Surface Water	*92,200*	*67,948*	*66,600*
Non-District Supplies			
Hetch Hetchy	62,915	62,904	63,000
Other Reservoirs and Streams (San Jose/Stanford)	14,250	8,440	10,000
Recycled Water	5,970	8,000	8,800
TOTAL	**344,935**	**351,944**	**346,300**
II. DISTRIBUTION OF ANNUAL WATER SUPPLY			
Distribution Within District System			
To Treated Water	129,700	134,200	140,500
To Surface Water: Irrigation/Environment	13,500	13,700	8,300
To Managed Recharge			
Santa Clara Groundwater Subbasin	94,300	98,700	80,800
Coyote & Llagas Groundwater Subbasins	24,300	26,000	34,900
Subtotal of Distribution to District System	**261,800**	**272,600**	**264,500**
Non-District Distribution			
Hetch Hetchy	62,915	62,904	63,000
San Jose/Stanford	14,250	8,440	10,000
Recycled Water	5,970	8,000	8,800
Subtotal of Non-District Distribution	**83,135**	**79,344**	**81,800**
TOTAL	**344,935**	**351,944**	**346,300**

Note: The annual water supplies reported in this table include only volumes managed by the District and others that are readily estimated. In addition to the managed recharged data included in the table, County groundwater supplies are augmented by naturally occurring recharge each winter and spring. These 'unmanaged' amounts are essential to County groundwater supplies and allow for the fact that the in-district groundwater pumping volumes in Table 2-1 usually exceed the annual managed recharge.

Recorded Operation for Calendar Year 2001

In 2001, the total water use in the County was 383,500 AF. Rainfall in the 2001 calendar year totaled 13.19 inches in downtown San Jose, about 93 percent of average. Total water use includes 273,900 AF of M&I and 30,100 AF of agricultural water. It also includes 79,400 AF provided by non-District contractors (Hetch Hetchy, Stanford/San Jose reservoirs, and recycled water deliveries). Of the District water used, 169,200 AF was provided through groundwater pumping, 600 AF through recycled water, and 131,200 AF was delivered from our three water treatment plants. In addition, 3,100 AF was delivered from surface waters for direct use. Table 2-1, which includes supplies available from natural recharge, presents a detailed look at the in-county water demand in 2001.

Table 2-2, which excludes natural recharge, presents how the water supply was managed and distributed in 2001. The District imported approximately 204,652 AF of water from three sources. In addition to its SWP and CVP supplies, the District received water from a recently completed intertie with the San Francisco Water District (SFWD). The intertie provided 6,084 AF to help meet treated water needs while PWTP was closed for construction. Local water releases totaled approximately 67,948 AF for delivery to groundwater recharge ponds or one of our three treatment plants. The remainder of the District demand was met with natural recharge or carryover storage from our groundwater basins.

Projected Operation Plan for Calendar Year 2002

The District's annual Operations Plan describes how supplies available to Santa Clara County will be used. A preliminary plan based on conditions known in June 2002 is summarized in Table 2-2. As of June 24, 2002, the 10 District reservoirs had a combined storage of approximately 80,844 AF, or about 47.7 percent of capacity, compared to 53.0 percent in June 24, 2001.

Imported water supplies are currently projected to be considerably less than the District's contractual entitlements. As of May 15, 2002, the Department of Water Resources (DWR) announced that 65 percent of the SWP entitlement of 100,000 AF will be available to the District. And, on June 25, 2002, the Bureau of Reclamation announced allocations of 60 percent of the 33,100 AF of CVP agricultural water, and 75 percent of the 119,400 AF of CVP M&I water entitlements. However, due to the District's Reallocation Agreement, the District will receive up to 97,500 AF of M&I water from CVP. This would result in a total supply of approximately 117,360 AF of CVP water and 65,000 AF of SWP water, for a total of 182,360 AF of imported water.

The total imported water supplies, including prior year carryover, are projected at 197,900 AF for 2002. However, allocations from both the CVP and SWP projects are subject to change as water supply conditions develop. If the June projections do not reach the District's anticipated deliveries, the shortfall can be made up from natural recharge and groundwater storage.

The District's 2002 Operation Plan provides projections of how District managed water (locally conserved and imported water) and other sources (Hetch Hetchy, recycled water and San Jose and Stanford stored surface water) will be distributed to efficiently use recharge facilities and provide treated water to meet demands. Table 2-2 shows the

planned distribution of the projected supplies of 346,300 AF for 2002. The difference between projected supplies and the projected demand shown in Table 2-1 can easily be met from natural recharge and available storage in the groundwater basins.

Banking and Reallocations

To provide reliability in future dry years, the District banks water in groundwater storage outside of the County. Primarily, the District banks State Water at the Semitropic Water Storage District in Kern County. Table 2-3 shows the annual changes and year-end balances for banked water during calendar years 2000 through 2002.

In 2001, the District sold 30,000 AF from its Semitropic Storage to the State of California in support of the CALFED Environmental Water Account (EWA). The EWA is more thoroughly discussed in Section III.

To further increase reliability against future drought, in 1997 the District executed a Water Reallocation Agreement with the US Bureau of Reclamation and agricultural districts in the San Luis and Delta-Mendota Water Authority. This 25-year agreement resolved disputes related to the US Bureau of Relamation's M&I Water Shortage Policy that provides CVP M&I water allocations of no less than 75 percent of historic use under most shortage conditions. In addition, Westlands and San Luis Water Districts agreed to augment the District's supplies in certain years to bring District CVP M&I reliability up to 75 percent of contract amount. In return, the District has reallocated 100,000 AF of CVP water to the agricultural districts, and will continue to optimize water supplies to reallocate more water if possible over the term of the agreement.

In recent years, the District has exchanged CVP allocations with San Benito County Water District, in order to improve water management by taking advantage of a difference in each district's contract year. The District purchases water for San Benito in summer months in return for San Benito returning a like amount, usually about 14,000 to 15,000 AF, to the District in January and February. This agreement allows the District to "hedge" against the CVP allocating a reduced supply in the following contract year. As of January 2002, all 2001 CVP contract exchange water (11,000 AF) has been delivered. The District has also participated in a small, trial water banking program with San Benito utilizing San Justo Reservoir. This program provided limited benefits to the District.

TABLE 2-3

District Water Banking for Calendar Years 2000 Through 2002

Water Banking	Actual 2000	Actual 2001	Projected 2002
SEMITROPIC WATER STORAGE DISTRICT (SWP WATER)			
Beginning Balance (January 1)	120,420	141,777	111,777
District Deposit or Withdrawal	23,730	0	3,311
Environmental Water Account (EWA) Withdrawal	0	-30,000	0
Transaction Losses	-2,373	0	-311
Ending Balance (December 31)	**141,777**	**111,777**	**114,777**
SAN BENITO COUNTY—SAN JUSTO RESERVOIR (CVP WATER)			
Beginning Balance (January 1)	1,478	1,406	0
Change in Storage—Bank Deposit or Withdrawal		-1,388	0
Transaction Losses	-72	-18	0
Ending Balance (December 31)	**1,406**	**0**	**0**
TOTAL BANKED ENDING BALANCE (DECEMBER 31)	**143,183**	**111,777**	**114,777**

III. BENEFITS AND SERVICES PROVIDED BY THE DISTRICT

Section 26.5 of the District Act specifies that this annual report provide details on the District's "...activities in the protection and augmentation of the water supplies of the district." Protecting available resources and planning for and augmenting future supplies requires that the District levy charges on the production of groundwater and enter into financial contracts for the delivery of treated surface water. The importation of water and management of local water supplies requires that the District undertake a wide range of supporting functions. This section describes the benefits and services that the District provides under the general headings of:

- Overall Resource Management
- Water Supply Augmentation
- Water Quality Protection
- Capital Improvements

OVERALL RESOURCE MANAGEMENT

Long-Term Planning for Water Supply

As the water management agency and water wholesaler for Santa Clara County, the District is responsible for planning the County's long-term water supply. How to ensure a safe and reliable water supply in face of periodic droughts and increasing competition for water supplies from other urban, agricultural and environmental water users throughout the state is a significant challenge. In February 2002, the District joined with other water agencies to form the Bay Area Water Agencies Coalition. This team will create a unified voice for Bay Area water suppliers and provide a forum to discuss regional water issues.

The District is currently updating its 1997 IWRP, directly linking it to Board policies and evaluating a variety of water supply sources to meet future demands. The update will include a number of ongoing planning processes and regulatory initiatives including the CALFED Bay Delta Program, and implementation of the CVPIA and the Endangered Species Act (ESA), which may significantly affect the availability and reliability of imported water supplies. The update will also examine the local water supply outlook and account for changes in beneficial uses of stream flows for water supply and environmental purposes.

The IWRP update will provide a methodology for evaluating water supply investments in terms of multiple planning objectives, such as water quality, reliability, and environmental benefits. The IWRP methodology will also explicitly assess risk factors across resource alternatives and the District in its evaluation of near-term opportunities linked to long-term investment decisions.

Stream and Watershed Management

The District plays a key role in balancing the water needs of a growing economy with those of the environment. The District has initiated a watershed management approach as a responsible steward of watersheds, including streams and riparian corridors. For

example, in October 1997, the Fisheries and Aquatic Habitat Collaborative Effort (FAHCE), which is comprised of the District, the California Department of Fish and Game, National Marine Fisheries Service, U.S. Fish and Wildlife Service, Natural Heritage Institute and the City of San Jose was formed to study the aquatic habitats in our managed streams and the impacts on them from District facilities and operations.

Another collaborative effort is the Santa Clara Basin Watershed Management Initiative (WMI). Since 1996, the District has been working with members from the business, public, environmental, civic and agricultural arenas, as well as professional and trade organizations and regional and local public agencies. WMI's goal is to use a consensus approach to create a comprehensive watershed action plan.

Stream maintenance projects are planned, designed, constructed, and operated in an environmentally sensitive manner to address reservoir water storage, and in-stream and off-stream groundwater recharge. Project specific measures are taken to protect sensitive species, water quality, fisheries, riparian and wetland resources. New management practices include scheduling the work to avoid impacts to nesting birds, removing sediment from half of the channel in alternating years on certain creeks, diverting flows around a work site, reseeding disturbed areas, and relocating fish.

Changes in land use and new developments can negatively impact water quality and District facilities. To minimize these impacts, the District's Community Projects Review Unit enforces the District's Ordinance 83-2, which regulates activities near District facilities, reviews external environmental documents, and coordinates with cities and other agencies with regard to their land use decisions.

Together, the foregoing activities strive to protect County habitat, while accommodating water supply and other human impacts.

Flood Protection and Stream Stewardship Program

To address community expectations and the District Board's Ends Policies on quality of life in the County, the District is using additional funding from its voter-approved Special Tax to provide for restoration and enhancement of natural resources within our watersheds. This element is an important part of the Clean, Safe Creeks and Natural Flood Protection Plan approved by County voters in November 2000.

The Clean, Safe Creeks plan will also protect water quality in our creeks and bays, and will benefit water supplies. Portions of the additional funding will be used to keep our creeks cleaner and free from trash and pursue improved detection and management of toxic materials (such as mercury and diazinon) that pollute our water supplies, creeks and Bay.

The District also participates in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) as a co-permittee. The objective of the SCVURPPP is to protect stream resources by preventing pollution from entering our creeks and the Bay. Each of the co-permittees implements its own, agency-specific storm water pollution prevention program. These activities, and the level of implementation, are specified in Performance Standards. Currently, the District implements Performance Standards for:

- Illicit Connection and Illegal Dumping Elimination Activities

- Industrial/Commercial Discharger Control Program
- Public Streets, Roads, and Highways Operation and Maintenance
- Storm Drain System Operation and Maintenance
- Water Utility Operation and Maintenance
- Planning Procedures
- Construction Inspection

In addition, the District collaborates in various program-wide efforts, including public education and monitoring.

Hydrologic Data Management

The District supports numerous data collection and analysis efforts covering rainfall, stream flows, reservoir storage, water use, groundwater levels, and other information that is essential to planning and operating our water distribution and delivery system.

Government Relations

The purpose of the Government Relations Unit is to inform and engage public officials, opinion leaders, and policy makers about the work of the District. This unit establishes collaborative working relationships with policy makers at the federal, state, regional and local levels to meet the needs of mutual constituencies; builds long-term relationships with public officials, policy makers and their staff to educate them about District services, projects, and issues; advocates for District legislative and administrative issues; pursues funding for water resources and flood protection projects; and serves as the advisory arm to District staff and administrators on strategies to facilitate positive relationships with elected and non-elected public officials.

Public Information and Education

The District's Public Information Office informs and educates residents about local water quality, water supply and stream stewardship issues. Such outreach programs are critical to the success of the District's overall mission, and are an important component of the water utility operations, including water conservation and resource protection programs, as they help ensure safe and reliable future supplies. The District conducts public education and information campaigns on several themes, including wise water use; water resource information; water recycling; clean, safe water; healthy creek ecosystems; and pollution prevention. To deliver this information most effectively, the office uses newsletters and brochures, local television, and radio and newspaper outlets. The District's comprehensive Web site also provides the public easy access to information on District programs. In addition, the office's award-winning school program provides hands-on instruction and curriculum materials for pre-kindergarten through college-level students and educators.

WATER SUPPLY AUGMENTATION

To maintain sufficient water supplies to support economic growth and maintain the quality of life in our community, the District aims to ensure adequate water supplies in both the short-and long-term. Obtaining adequate supplies for the future has two aspects: maintaining the

reliability of existing supplies through both wet and dry years and developing access to additional supplies to meet future needs.

Ensuring the availability of 300,000 AF annually to 15 cities spread over 1,300 square miles requires operation of the following facilities:

- 10 surface reservoirs with a capacity of 169,000 AF
- 17 miles of canals
- 393 acres of recharge ponds
- 76 miles of controlled in-stream recharge in the County
- 142 miles of pipelines
- Three water treatment plants
- Three pump stations

To manage the County's water storage reservoirs, both surface and underground, the District operates and maintains a countywide conservation and distribution system (see Water Conveyance, Treatment, and Distribution map, Appendix C). The system conserves local runoff for either recharge into the groundwater basin or treatment at one of the District's three water treatment plants. The District also operates several local pipelines to transport imported raw water and locally-conserved water to various locations within the system for treatment and distribution or for groundwater recharge.

The District has long-term agreements to purchase water to augment local water supplies through the CVP and SWP facilities. In addition, the District supports the development of recycled water and promotes water conservation in homes, business, and agriculture. A significant effort is also dedicated to preparing long-range water supply plans, including planning for droughts. The principal activities of the District in augmenting water supplies are described below.

Managing Groundwater Recharge

The District operates ten reservoirs that conserve water for later recharge into the groundwater subbasins. The Santa Clara Valley groundwater basin provides essential supplies during dry periods. It has a maximum operational capacity of approximately 525,000 AF and normally provides one-half of the County's annual water supply for potable use. The basin is divided into three interconnected subbasins (see Groundwater Subbasins and Major Recharge Systems map, Appendix C). Groundwater storage is replenished using more than 30 recharge facilities in six major recharge systems within these three subbasins. In addition to local water, these facilities also percolate imported water into the aquifer. The annual average recharge capacity of these systems is 157,200 AF.

Although groundwater subbasins are also replenished by water that percolates through the beds of unmanaged streams, without the District's recharge facilities the majority of the natural stream runoff would flow out to the Bay.

The Santa Clara subbasin underlies the northerly portion of the District and includes the majority of the streams and recharge facilities operated by the District. In 2001, the District replenished this subbasin with approximately 98,700 AF of locally-conserved and imported water. The Coyote and Llagas subbasins in the southerly portion of the District

were replenished with approximately 26,000 AF of locally-conserved and imported water.

Surface Water Transportation and Storage

Water supply reliability includes both the availability of the water itself as well as the reliability and integrity of the infrastructure and systems that transport and store it. Thus, all activities related to operating and maintaining the District's dams, reservoirs, canals, and pipelines are directly related to providing water supply.

District facilities are subject to regulation regarding seismic performance of dams, reservoir landslide monitoring and evaluation, and periodic field inspections. Consequently, maintenance activities include continuing liaison and data exchange with the State Division of Safety of Dams and the Federal Energy Regulatory Commission with regard to the safety of District dams.

Imported Water

The SWP, CVP, and City and County of San Francisco's Hetch Hetchy Project provide approximately 60 percent of water supplies in average years to the County. Imported water is conveyed to the County through the South Bay Aqueduct, which carries water from the State Water Project; the federal San Felipe Division, which brings water from the CVP; and the Hetch Hetchy Aqueduct, which brings water from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains.

Maintaining reliable access to high-quality supplies of imported water is essential to meeting current water needs and to implementing the District's IWRP strategy for future water supplies. Both Board and staff members devote considerable time in three areas related to securing reliable supplies of imported water: Resolution of Bay-Delta Issues through the CALFED process, Water Banking, and Managing CVP Contract Issues. Each of these is discussed below.

Resolution of Bay-Delta Issues: (CALFED Bay-Delta Program)

The District imports water through the San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (Bay-Delta) under contracts with the SWP and the Federal CVP. The Bay-Delta is the largest estuary on the west coast and supports more than 750 species of plants and wildlife. The Bay-Delta also provides water supply to more than two-thirds of the population in the state and to agriculture in Central Valley. However, decades of competing demands have taken a toll on the Bay-Delta and today it no longer functions as a healthy ecosystem or as a reliable source of water. Regulatory actions to protect threatened or endangered fish have reduced the reliability of Bay-Delta water supplies. Water quality is degraded, making it difficult and expensive to meet drinking water standards. In addition, the vulnerability of delta levees to seismic and flooding failures threatens both the infrastructure and the quality of California's water supply.

The District plays an active role in resolving these Bay-Delta issues by participating in the state/federal/public CALFED process and other related processes. Since the signing of the Bay-Delta Accord in December 1994, a

coalition of state and federal agencies, known as the CALFED Bay-Delta Program, has been developing a plan for resolving Bay-Delta issues in cooperation with environmental, business, urban, and agricultural interests. In July 2000, CALFED released its Final Programmatic EIR/EIS (FPEIR/S). A Record of Decision (ROD) and Notice of Determination were adopted in August 2000.

The District is a leader in garnering broad support for the CALFED Bay-Delta Program because a successful Bay-Delta resolution is absolutely essential to address California's water problems and to maintain the public welfare and the economic viability of the state.

The District supports the CALFED Program through its payments to the CVPIA Restoration Fund and participation in the EWA. In FY 2001–02, the District contributed approximately $1.8 Million toward restoration of the Bay-Delta ecosystem through payments to the CVPIA Restoration Fund. The District also signed an agreement with DWR for the sale of 30,000 AF of stored water from its account in the Semitropic Water Bank to the EWA.

Banking Available Supplies for Future Use

The District's IWRP identified banking of excess supplies in wet years as a central element in the preferred strategy for providing supplies needed in future dry years.

In May 1996, the Board took the first step in implementing the banking strategy when it approved an agreement with Semitropic Water Storage District to store 45,000 AF of State Water Project water. In 1997, the Board approved a long-term agreement with Semitropic. Under the terms of this agreement, the District has banked water in years 1997 through 2002. In 2001, the District sold 30,000 AF of its banked water to the State of California in support of the CALFED EWA. The EWA payments of approximately $8 million were based on the District's cost to store and retrieve water from the Bank. After accounting for this sale and system losses in Semitropic Water Storage District, the District now has over 114,000 AF in storage. The total capacity available to the District is 350,000 AF. (See Table 2-3).

Managing Central Valley Project Contract Issues

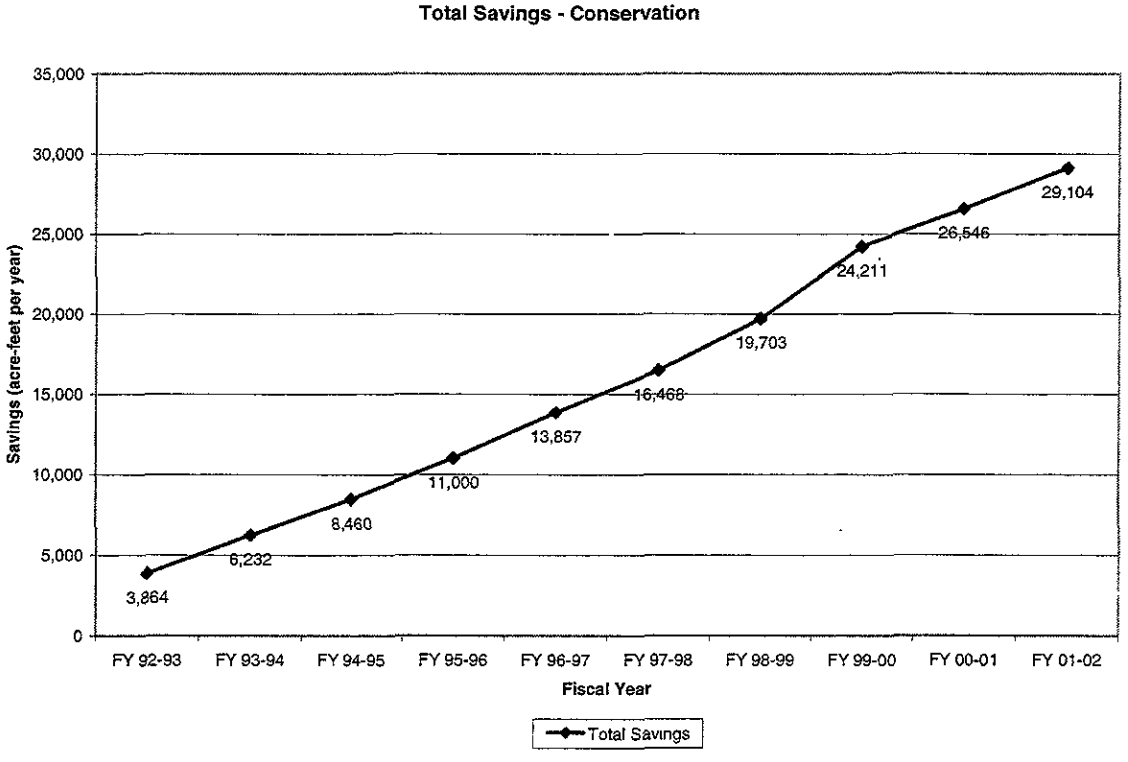
The District's agreement with the Bureau of Reclamation provides for eventual payment of a major share of Bureau's costs for constructing the San Felipe Division of the CVP. Under the 1977 contract, the District initially paid a reduced rate for its water deliveries, in recognition of the District's need to expand its local infrastructure to accept CVP water. Because San Felipe construction costs were much higher than anticipated, the contractually specified rates paid by the District have been too low to fully pay the District's annual share of the San Felipe Division costs. The cumulative shortfall is being tracked by the Bureau; however, the District is contesting the Bureau's accounting for project costs and the District's share of costs. Since 1998, the District and other CVP contractors have been negotiating with the Bureau to settle these complex financial issues. Some progress has been made, and discussions are continuing. The District has set

aside over $50 million to pay its share of costs and hopes to resolve the problem and renegotiate its contract for CVP supplies over the next few years.

Water Use Efficiency: Conservation

The District's Water Conservation Program is essential to improving water supply reliability because water savings reduce current and future water demand. State and federally mandated conservation programs include implementing a set of BMPs contained in the California Urban Water Conservation Council's Memorandum of Understanding regarding Urban Water Conservation, adopted by our Board in 1991. The CVPIA also requires implementation of these BMPs. Key program elements include ultra-low-flush toilet (ULFT) rebates and retrofits, water-efficient washing machine rebates, low-flow showerhead and faucet aerator distribution, promoting water efficient landscaping, and implementing commercial/industrial/institutional and agricultural water management programs. The Water Conservation Program's goal, as identified in our IWRP, is to reduce yearly baseline water demands by a total of 74,000 AF (46,000 through active savings and 28,000 through passive savings) by the year 2020. To date, the District has reduced the yearly baseline water demand by 29,000 AF (8,800 through active savings and 20,200 through passive savings). The figure shown below illustrates the progress that the District is making to reach this goal.

FIGURE 3-1
Cumulative Water Savings From Conservation Programs



Between 1990 and February 2002, the District has accomplished the following:

- Ultra-low-flush toilets for residents installed: 232,051

- Ultra-low flush toilets for businesses installed: 7,331
- Water efficient washing machine rebates issued (for residents): 23,426
- Water efficient washing machine rebates issued (for businesses): 769
- Low-flow showerheads distributed: 110,126
- *Faucet aerators distributed: 52,275*
- Large turf audits completed (Irrigation Technical Assistance Program): 451 sites signed up for program - 423 meet the potential savings criteria and received an audit.
- Water-Wise House Calls (Residential Surveys) completed: 9,141 single-family *and multi-family units*
- Financial incentives paid to businesses for making water efficiency improvements: 35 sites received $479,613 in financial incentives, resulting in 863 acre feet per year in savings.

Of the aforementioned accomplishments, residential and business ULFTs contributed to over 55 percent of the annual water savings. Faucet aerators and showerheads respectively contributed 15 percent and 11 percent of the savings. Water efficient washing machines reduced the annual water demand by 1.5 percent. Other programs, such as the large turf audits, water wise calls and business improvements (excluding the ULFTs) collectively reflect 13 percent of the annual water savings.

The District is in the fourth year of a Mobile Lab Program, which provides County farmers with on-site irrigation system evaluations and recommendations for efficiency improvements. The District's Water Conservation and Nitrate Management Programs continue to work closely together to ensure that efficient water use and nitrate (fertilizer) management are addressed by the Mobile Lab and In-Field Nutrient Assessment Programs. These programs match fertilizer use and irrigation to crop needs. The recommendations are designed to maintain or improve agricultural productivity. To date, 117 sites — representing 46 growers, have received the Mobile Lab field tests.

Several Commercial/Industrial conservation programs began in FY 2000–01. The District, along with several other agencies, is offering rebates on high-efficiency commercial clothes washers. Furthermore, a contractor was hired to install ULFTs in restaurants and food stores, gas stations, and wholesale/retail stores. The District also co-funds Project WET (Water Efficient Technologies), along with the City of San Jose, which offers rebates to commercial and industrial water customers for the implementation of process and equipment changes that reduce water needs and wastewater discharges.

A new program for FY 2001–02 is a water budget program for large landscape sites and land area for different crops. The goal of this program is to calculate the irrigated landscape area for approximately 50,000 irrigation-only and mixed-use commercial accounts that are distributed over a 900-square-mile area. The District has been

awarded $406,000 in CalFed grant funding from the California DWR to help fund this project.

Water Use Efficiency: Water Recycling Partnerships and Assistance

Recycled water was identified in the IWRP as a key element of the preferred strategy to increase water supply reliability. The District's current approach is to develop partnerships with the cities and publicly owned treatment works that develop and/or distribute recycled water. Two major efforts are underway.

The first is to provide financial support for the distribution of nonpotable water. The District provides financial support under specified agreements to cities that develop recycled water. The District currently has agreements with the City of Sunnyvale and the South Bay Water Recycling Program (SBWRP). In 1997, the Board increased the District's financial support to suppliers of nonpotable recycled water from $93 per AF to $115 per AF.

The District Board established an Ends Policy setting countywide recycled water use targets of 5 percent (20,000 AF per year) by 2010 and 10 percent (45,000 AF per year) by 2020; these targets will be re-examined during the annual review of Board policies. Countywide recycled water usage reached 8000 AF in 2001.

San Jose approved an $82.5 million expansion of the SBWRP in June 2001. The expansion includes pipeline extensions into Santa Clara and Milpitas, and a pipeline extension into Coyote Valley in south San Jose. The District and the City of San Jose executed an agreement in January 2002 to cost share on the pipeline into Coyote Valley and to discuss a long term partnership agreement on the entire system.

The District is working with SCRWA to deliver nonpotable water to Eagle Ridge Golf Course and other customers. Construction on the initial component is nearly complete and full operation is expected in 2003. Recycled water usage is expected to reach 1,200 AF per year when all facilities are completed.

WATER QUALITY PROTECTION

In addition to augmenting water supply, the District is responsible for protecting surface and groundwater resources for use in the County. Water quality programs include: (1) treating local and imported surface water for sale to retailers, (2) protecting surface and groundwater resources from contamination, and (3) participating in a CALFED-sponsored Bay Area Regional Blending/Exchange Study to investigate opportunities for water quality improvements through partnership in regional facilities or exchanges. Water treatment is necessary to ensure that the water the District provides meets or exceeds all federal and state drinking water standards. Resource quality protection has numerous aspects that are discussed below.

Treated Water Operations

The District owns and operates three water treatment plants: Santa Teresa Water Treatment Plant (STWTP), Rinconada Water Treatment Plant (RWTP), and Penitencia Water Treatment Plant (PWTP), which provide high-quality treated water to the residences and businesses in Santa Clara County.

Reflecting its commitment to provide the highest quality water possible, the District was among the first water utilities nationwide to join the Partnership for Safe Water in 1995 (Partnership). The Partnership is a voluntary program developed cooperatively by the United States Environmental Protection Agency (EPA), the American Water Works Association, the Association of State Drinking Water Administrators, and several other national drinking water industry organizations. The purpose of the program is to further reduce the potential risks to consumers from microbial contaminants such as cryptosporidium and giardia. The District has consistently surpassed the Partnership's goal for filtered water turbidity, a critical indicator of plant performance.

Capital Improvements at the Water Treatment Plants

The District has completed the first stage of planned improvements to the treatment processes at each of its three treatment plants, in response to two relatively new federal Safe Drinking Water Act (SDWA) amendments: the Interim Enhanced Surface Water Treatment Rule and the Disinfectant/Disinfection By-Product Rule, announced in December 1998. The official compliance date for these amendments was December 2001. The new water treatment processes reduce the by-products that occur when surface waters containing organic materials are disinfected with chlorine.

Stage 2 of the process upgrades will further reduce the levels of disinfection by-products and potential for microbial contaminants in treated water and to further improve water quality. This will include switching to ozonation as the primary disinfection method instead of chlorination and installing filter washwater clarification facilities. The Stage 2 work also includes structural modifications to improve treatment plant reliability during seismic events and process additions to increase treatment capacity at Rinconada to meet projected future demands. The design is nearing completion and the $192 million capital improvement project is scheduled for construction to begin in fall 2002 with completion in 2007.

To complement these new treatment efforts, the District also is planning a new Water Quality Laboratory. The facility will replace the 30-year old Rinconada Laboratory and will more reliably and cost-effectively monitor the quality of our water supplies. Construction is scheduled to begin in May 2003 and is projected to be completed in August 2004.

Resource Protection

Preserving the quality of water supplies is more cost-effective than treating contaminated or degraded water. Pursuant to the District's mission to provide high-quality water to the County, the District continually addresses water quality problems that threaten the delivery of safe, reliable, high-quality water. This is to ensure that water delivered to the District's retailers meets or exceeds all state and federal drinking water regulations. The District also responds to unforeseen water quality issues and acts to ensure the continued ability to deliver high-quality water.

The following subsections describe the District's activities to protect groundwater and surface water that are included in programs such as Water Quality and Reservoir Watershed Management, Groundwater Quality Management, Well Ordinance Program, the Underground Storage Tank Program, and Water Quality Special Studies. All these are directed at protecting the quality of the County's sources of water.

Methyl Tert-Butyl Ether (MTBE)

A continuing threat to the drinking water supply is the gasoline additive called MTBE, a colorless chemical compound added to reformulated gasoline that was developed to reduce smog and meet the goals of the Clean Air Act (CAA). Since November 1996, the District, in partnership with the County's water retailers, has engaged in an aggressive monitoring program to track the occurrence of MTBE in the County's water supplies. In November 1997, the District confirmed the presence of small amounts of the chemical in water entering and leaving one of its three treatment plants. Traces of the additive have been found in two public water supply wells; these wells were removed from service. Currently, MTBE is nondetectable in the local public water supply.

The District is actively pursuing long-term solutions to this potential problem through a two-pronged approach. A high level of effort is being expended to prevent more of the contaminant from entering public water supplies. In addition, we have expanded our legislative and outreach efforts (through our Office of Public Affairs) to restrict the use of MTBE as a gasoline additive. In late March 1999, the Governor of California ordered a phase-out of the additive in California gasoline by the end of 2002, but recently extended the date to December 2003.

Monitoring will continue at our reservoirs, treatment plants, and in all of the District's groundwater subbasins. The District completed a focused groundwater MTBE monitoring study in December 2000. No reportable concentrations of MTBE were detected in any of the approximately 100 wells in the study. The District continues to monitor groundwater for MTBE on an annual basis.

A District pilot study to determine if MTBE releases are occurring at sites that comply with new standards for underground storage tanks found MTBE in groundwater at 13 of 28 sites. In addition, the District completed a detailed study of 16 leaking underground storage tank sites to determine if undetected releases are occurring and identify potential weaknesses in fuel storage, management, and delivery operations. Based upon these studies, the District requested the Regional Water Quality Control Boards (RWQCBs) to require soil and/or groundwater sampling at all operating stations in the County. The Central Coast Regional Board responded by requiring post-closure groundwater monitoring at facilities close to water supply wells. The San Francisco Bay Regional Board responded by requesting groundwater sampling at approximately 49 operating stations. The results show MTBE at 60 percent of the sampled stations. At the District's request, the San Francisco Bay Regional Board is expanding the program to require groundwater sampling at all operating gasoline stations in high risk areas of the groundwater basin, including the recharge areas and near drinking water supply wells.

To protect local surface water supplies from MTBE, the District is working with Santa Clara County Parks and Recreation on a program to manage the number of gasoline-powered watercraft allowed on three District reservoirs. The goal of the program is to ensure that concentrations in the reservoirs do not surpass our target of three parts per billion (ppb). In May 2000, the District and Santa Clara

County Parks and Recreation Department began requiring the use of gasoline produced without MTBE in all watercraft on District-owned reservoirs.

Nitrate Management

A different threat to groundwater supplies is nitrate contamination. High nitrate concentrations in drinking water can cause health problems in infants less than six months of age. Nitrate contamination is a particular concern in the southern portion of the County, but increased concentrations of nitrate have also been reported in parts of the North County. The District has identified the main sources of nitrate in the South County area as fertilizer applications, septic systems, and animal enclosures. The District has designed a Nitrate Management Program to monitor nitrate occurrence, reduce nitrate exposure, and reduce nitrate loading throughout Santa Clara County.

To monitor nitrate occurrence, the District has established a network of more than 60 wells throughout the South County study area to assess long-term trends. The District also analyzes the nitrate levels reported by public water suppliers throughout the County to supplement the data collected by the District. The District is currently performing a detailed analysis of the North County nitrate data to determine if there are regional concentration trends that might be of concern.

To reduce exposure to nitrate, the District offers a free nitrate analysis to all private water supply well users. Since 1998, more than 600 tests have been conducted. More than half the wells tested have exceeded the maximum contaminant level of 45 milligrams per liter of nitrate. Test recipients are given a copy of the results along with a fact sheet detailing what nitrate is, where it comes from, what the health risks are, how to remove nitrate using point of use treatment systems and how to prevent further contamination.

To reduce nitrate loading, the District has launched a public education program in conjunction with the University of California Cooperative Extension, Department of Agriculture, Farm Bureau and Natural Resource Conservation Service.

In Spring 2002, a series of workshops were conducted to provide property owners with the tools they need to evaluate how their properties are affecting local natural resources, especially water resources. The workshop series will be repeated in the Fall 2002 and annually thereafter.

The District will continue working with the Santa Clara County Department of Environmental Health (County Health) to communicate information to owners on septic systems operation and maintenance. The District and County Health prepared a Well Owner's Guide that was mailed to more than 3,000 well owners in the county. Staff is also participating in the stakeholder group for preparing statewide regulations for groundwater protection from onsite wastewater treatment systems.

Groundwater Guardian

The District has been designated as a Groundwater Guardian by the Groundwater Foundation based on our groundwater protection efforts. The Groundwater Foundation is a nationally recognized, private, non-profit, educational organization dedicated to protecting groundwater resources from contamination and over-drafting. As a Groundwater Guardian, we plan to develop and support community outreach and protection efforts, educational materials and provide technical assistance for groundwater protection activities.

Underground Storage Tank Fuel Cleanup Program

The District oversees the investigation, cleanup, and closure of cases where soil and/or groundwater have been affected by petroleum fuel and additives such as MTBE from leaking underground storage tanks (USTs). The District also provides peer review and regulatory liaison on solvents and other contamination cases that threaten groundwater quality.

More than 2,340 fuel leak cases have been reported in the County, and 75 percent of these cases have received regulatory closure by the District or other regulatory agencies. To date, 1,690 sites in North County and 74 sites in South County have been closed. The District is currently overseeing 464 sites in North County and 28 sites in South County. The remaining open sites are overseen by the RWQCBs, with the exception of six sites that receive oversight from the City of Gilroy.

The majority of the active cases are associated with releases of gasoline. MTBE has been detected in groundwater at more than 370 of the active gasoline tank sites, and at very low concentrations, in at least one large public water supply well, one well that supplies a local school district, and several private wells. The District prioritizes those sites that pose the greatest risk to the groundwater basin and ensures that immediate action is taken to address the sites which have the greatest potential for contamination of the water wells. The District is also working with the RWQCBs to require environmental monitoring at operating gasoline UST facilities that pose the greatest threat to groundwater.

In addition, the District also conducts the Solvents and Toxics Liaison Program. Activities that use chlorinated solvents are a significant threat to the basin, particularly when they result in releases to soil and groundwater. The large number of electronics manufacturing plants, together with heavy industry and military facilities, have resulted in many solvent release sites with shallow groundwater. The District provides peer review and tracks the progress of these sites to ensure that water resources are protected.

Well Ordinance Program

The District protects the quality and quantity of the County's groundwater resources by ensuring that all wells in the County are constructed, maintained, modified, and destroyed in compliance with the District Well Ordinance and the State Well Standards.

The Well Ordinance program includes permitting, tracking, inspecting, and violation enforcement of all wells in the County. The program also assists the public in destroying abandoned wells and maintains District-owned wells. During FY 2001–02, the District:

- Permitted 2,357 wells and other deep excavations for construction or destruction
- Inspected 2,201 wells and other deep excavations constructed or destroyed
- Registered 1,324 wells
- Provided drilling services to the owners of eight abandoned wells

HAZMAT Emergency Response Program

To prevent contamination of the County's water supply from hazardous materials (HAZMAT), the District manages the investigation, analysis, removal, and disposal of suspected or known hazardous materials dumped or spilled in the vicinity of source areas such as reservoirs, recharge ponds, rivers and creeks.

Urban Runoff Program

The District has dedicated efforts to improve the quality of storm water runoff as a member of the SCVURPPP. Efforts such as this improve the quality of storm water that flows into streams in Santa Clara Valley. The District participates in this program as 1 of 15 copermittees under a single Clean Water Act (CWA) permit from the RWQCB. Combining efforts with other local agencies for this permit has greatly improved the performance and efficiency of this program. For instance, the permit renewal fee is $10,000 per year. Combining 15 agencies under one permit saves $140,000 per year and requires that only one set of annual reports be prepared and submitted to the RWQCB, rather than 15.

CAPITAL IMPROVEMENTS

Project management and engineering services for projects or studies initiated by the District are provided by the Capital Program Services Division. In addition to preparing proposals and negotiating scopes of work with project owners, the Division is responsible for the development, management, monitoring and tracking of the District's Capital Improvement Plan (CIP). This plan is intended to be used as a capital investment plan that will identify and plan for the District's 15-year capital improvement spending and the funding sources to fund the long term plan. It is to be used as a tool to facilitate solutions to funding deficiencies, long-term staffing needs, and project prioritization conflicts.

Some major capital improvement projects currently in progress include the South County Recycled Water Improvement, Raw Water Control System, and Penitencia Delivery Main Modulating Valve. The purpose and completion dates of these projects are as follows:

- The South County Recycled Water Improvement project will increase recycled water use in the South County area by providing a modern water recycling system to serve customers in that area. This project is in partial operation and construction is nearly complete.

- The goal of the Raw Water Control System project is to improve the hardware and software used to operate the raw water transmission and distribution system. This project is scheduled for completion in June 2003.

- The Penitencia Delivery Main Modulating Valve project is intended to give the District operational flexibility to meet future customer demands. The project is scheduled for completion in April 2003.

In FY 2002–03, the projects scheduled to begin construction include STWTP and PWTP Improvement Stage 2, New Water Quality Lab, and Rinconada Reservoir Roof Rehabilitation. The purpose and completion dates of these projects are as follows:

- The Stage 2 projects aim to enhance treated water quality by ensuring that all applicable water quality regulations are met or exceeded. This project also aims to improve the reliability of the water treatment plants by upgrading existing major treatment process systems to withstand seismic and landslide events. Design documents for the Stage 2 Water Treatment Plant upgrades are nearly complete; construction is scheduled to begin during FY 2002–03 and end during FY 2005–06.

- The New Water Quality Laboratory project will produce a new laboratory that meets future laboratory needs. The project is scheduled to be completed by FY 2003–04.

- The Rinconada Reservoir Roof Rehabilitation project will be retrofitted to comply with current seismic standards. This project is scheduled for completion in FY 2002–03.

The Asset Management Program was started in January 2002 to provide a better basis for identifying long-term capital rehabilitation and replacement needs. This program's goal is to lower the cost of asset ownership and improve system reliability by establishing a life-cycle preventative and corrective maintenance schedule for each of the District's assets. The plan that will be generated from this effort will identify projects similar in nature to the Almaden Dam Outlet, Lenihan Dam Outlet Modifications, Almaden Calero Canal, and Rinconada Reservoir Roof Rehabilitation. The initial program plan is estimated to be complete by March 2003.

Table 3-1 shows the funding for capital projects for FY 2001–02 and planned funding for the next five fiscal years. The cumulative investment between FY 2001–02 and FY 2006–07 is projected to be approximately $300 million (constant 2002 dollars).

TABLE 3-1
Capital Improvement Projects —Fiscal Years 2001–02 Through 2006–07

(Thousands of Constant 2002 Dollars)

	01/02 Adjusted Budget	02/03 Budget Addendum	03/04 Projection	04/05 Projection	05/06 Projection	06/07 Projection
SOURCE OF SUPPLY						
So County Recycled Water Impro	244	165				
Recycle Wtr Connect-SC Conduit	198	360	1,479			
Recycle Wtr PL Rehab Cord/SCRWA	1,099	81	516			
Water Facilities Sign Project	102	107				
Silver Creek Pipeline		348	6,800			
San Luis Reservoir Lowpoint	5,566	3,363	4,000	1		
Santa Clara Tunnel Landslde	152					
Almaden Dam Outlet	1,016	1,026	380	4,715		
Fellow's Dike Rehabilitation	413	562	470	4,874		
Lenihan Dam Outlet Mods	238	1,342	460	11,631		
Asset Management						10,000
Dam Instrumentation - Capital			1,064	1,450	1,228	1,166
System Capacity/Expansion			250	250	250	
Subtotal	9,028	7,355	15,419	22,921	1,478	11,166
RAW WATER TRANSMISSION & DISTRIBUTION						
Central PL Protect at Route 87	3	17				
Central P/L Mods at Capitol Ave. & Berryessa	233					
Vasona Restroom Modification	8	9				
Raw Water Control System	1,040	219				
Coyote Canal Extension Abandonment	4	7	30			
Kirk Ditch	5					
Almaden Calero Canal	408	545	348	600	300	
San Pedro Recharge Facility	270	111	15	10	10	
Subtotal	1,971	908	393	610	310	0
WATER TREATMENT						
Various Pentitencia WTP projects	988	1,173	3,423	482	208	170
Various Santa Teresa WTP Projects	1,304	1,021	4,893	1,082	285	170
Various Rinconada WTP Projects	3,294	9,064	10,944	572	250	175
PWTP Treatment Improv Stage 1	1,825	231				
PWTP Treatment Improv Stage 2	708	20,679	505	718	306	
STWTP Treatment Imrpov Stage 1	257	33				
STWTP Treatment Improv Stage 2	878	36,051	505	718	767	265
RWTP Treatment Improv Stage 1	488	62				
RWTP Treatment Improv Stage 2	1,247	538	65,505	718	767	1,063
New Water Quality Laboratory	180	158	166			
PWTP Ops Bldg Modifications & Expansion			400	950	470	185
Upflow Clarifier Inlet Valves				5	341	
Local Filter Backwash Control					45	360
PWTP Backwash/Disinfection/Screening				37	1,567	6,964
RWTP Backwash/Disinfection/Screening				52	2,402	12,092
STWTP Backwash/Disinfection/Screening				29	2,095	10,555
Subtotal	11,169	69,010	86,341	5,364	9,503	31,999
TREATED WATER TRANSMISSION & DISTRIBUTION						
Treated Wtr T&D Inst Upgrade	224	68				
San Tomas Injection Well	5					
SCVWD SFWD Intertie	141	74				
PWTP Modulating Valve	1,083	364				
Rinconada Res Roof Rehab	435	787	19			
Snell Pipeline Cathodic Prot	47	124	60			
Treated Water Air& Vacuum Valve			285	1,150	2,903	554
Subtotal	1,934	1,417	364	1,150	2,903	554
TOTAL CAPITAL PROJECTS	**24,102**	**78,690**	**102,517**	**30,045**	**14,194**	**43,719**

IV. FINANCIAL OUTLOOK FOR THE WATER UTILITY ENTERPRISE

INTRODUCTION

The purpose of this section is to describe the short-term and long-term financial requirements for achieving the Board's Ends Policies and to present a funding approach. Section I reported the adopted rates for FY 2002–03. Section IV describes the multi-year financial analysis and the funding approach that serves as the foundation for the adopted rates in each zone. The proposed funding includes a series of increases in water rates in each zone for the next ten years, combined with additional debt financing. Appendix B describes the Water Utility revenue sources, cost centers, and reserves as well as Board policy regarding finances.

The Water Utility's revenue requirements remained relatively stable for the period from 1993 to 1998 and rates were held constant. In 1998, the utility made the first of a series of capital investments required to comply with new water quality regulations. Concurrently, the District faced higher costs for its water purchased from the Bureau of Reclamation. Consequently, the District embarked on a series of rate increases that saw the M&I groundwater rate in North County increase from $240 per AF in FY 1997–98 to $340 per AF currently in effect in FY 2002–03.

The current outlook is for continued rate increases to cover higher electricity costs and security costs, as well as for new programs, such as the asset management program and the Calfed Bay-Delta Program, to manage growing maintenance needs and investments to ensure the reliability of District water treatment and delivery facilities. Section III, describes the continuing water utility programs and other issues that require additional funds for both capital and operating outlays. Projections of the capital and operating costs indicate that wholesale water rates will need to increase in the next several years, as the utility invests over $281 million (inflated 2002 dollars) in capital improvements from fiscal years 2002–03 to 2006–07.

The financial outlook does not include any estimates of the costs for implementing proposed solutions to the Bay-Delta water quality problems, conclusions drawn from the current IWRP study, capital requirements from the asset management plan, or potential District investments in future recycled water facilities in the North County. Similarly, newly identified watershed and habitat improvement programs could add cost in the future. As discussed in Section III, these and other items are in the planning stages and include a wide range of potential program costs and facility investments.

REVIEW OF DISTRICT'S FINANCES FOR FISCAL YEARS 2000–01, 2001–02, AND 2002–03

The District's financial plans are designed to carry out the direction of the Board's Ends Policy 2.1, "There is a reliable supply of healthy, clean drinking water." Some of the major increases in the FY 2002–03 budget reflect the higher cost to maintain or upgrade the District's aging facilities to enable better operations under increasingly stringent public health and environmental requirements.

Table 4-1 shows the revenue requirements that are the basis for the adopted rates, breaking out operations, water purchases, extraordinary items, and capital for fiscal years 2000–01 through 2002–03. The net requirements are the revenues that must be available from water sales, property taxes, and other sources after using revenue bond proceeds and allowing for funds

added to, or used from reserves. Reserves provide a balancing mechanism to smooth fluctuations in the level of revenue that must be raised from water sales in a single year. *Appendix B gives a description of each of the Water Utility Reserve Funds.*

TABLE 4-1
Overview of Water Utility Revenue Requirements

($ Millions)

Revenue Requirements	Actual 2000–01	Estimated 2001–02	Budgeted 2002–03
Operations	62.7	86.8	92.5
Water Purchases			
Federal Water	12.7	14.2	14.2
State Water	12.0	11.1	10.3
Extraordinary Items (Includes ISMP & CVP pymt)		5.4	21.8
Capital Projects	66.2	24.1	78.7
TOTAL REQUIREMENTS	**153.6**	**141.6**	**217.5**
Add/Subtract Changes in Reserves	22.9	(15.7)	(15.4)
Less Revenue Bond Proceeds	54.5	-	80.0
Net Requirements From Water Utility Revenues	**122.0**	**125.9**	**122.1**

Fiscal Year 2000–01

During FY 2000–01, significant operating outlays totaling $9.8 million were made in the *following continuing programs:*

- $5.4 million for expanded efforts in Water Conservation Program
- $1.3 million for FAHCE
- $1.6 million to improve electrical power reliability at treatment plants and pump stations
- $1.5 million for water banking

Table 4-1 shows that water purchases totaled $24.7 million and capital projects totaled $66.2 million FY 2000–01. Construction was completed on Stage 1 improvements at Rinconada and Santa Teresa Water Treatment Plants.

Reserves increased by $22.9 million due in part to revenue bond proceeds that were received in December 2000.

Fiscal Year 2001–02

Estimated operations requirements for FY 2001–02 show a $24 million increase over actual requirements for FY 2000–01. Some of the increase results from higher electric power and security costs. Planned expansion of specific programs contributes as follows: banking, $2.6 million; recycled water, $2.2 million; additional water quality testing, $0.7 million; asset management plan, $0.4 million, and upgrades to process control systems, $1.0 million. Nearly $4 million of the increase arises from a shift to budget management and administrative labor directly to the water utility, rather than general District overhead. This accounting change was instituted to ensure that

management charges are appropriately assigned to the programs and projects overseen by each manager. This will result in a more accurate and equitable accounting than can be accomplished using overhead rates. Table 4-1 also includes extraordinary items of $3.4 million for the District's Information Systems Program (ISMP) payment and $2.0 million for the District's accrued costs for the CVP San Felipe Division. Capital appropriations for this fiscal year total $24.1 million, of which $11.0 million goes to further design and construction efforts at the water treatment plants.

Current estimates show that a portion of the funding for FY 2001–02 outlays will be met by use of the reserves.

Fiscal Year 2002–03

For FY 2002–03, the projected increase of $5.7 million in requirements for operations includes additional funds for recycling and expanded programs to ensure the security and reliability of District facilities. The cost of water purchased from the federal and state projects continues to be a major budgetary item with $24.5 million included for this year. Also, in FY 2002–03, $1.8 million is budgeted for Water Utility contributions to the ISMP, and $20.0 million is budgeted to pay a portion of the District's accumulated cost of the San Felipe Division of the CVP. Since 1989–90, the Water Enterprise has reserved moneys in the Bureau Repayment Appropriation for this purpose. Any budgeted funds that are not paid out to the CVP for water purchases are set aside in a reserve, while negotiations are underway with the Bureau of Reclamation to settle on the amount of the District's accrued costs.

In FY 2002–03, the budget for capital projects is $78.7 million. A significant portion is for construction of the Stage 2 improvements at the water treatment plants, as well as construction of the new water quality laboratory. Design and construction of capital improvements mainly directed at enhancing the safety of drinking water delivered from the District's three water treatment plants are underway.

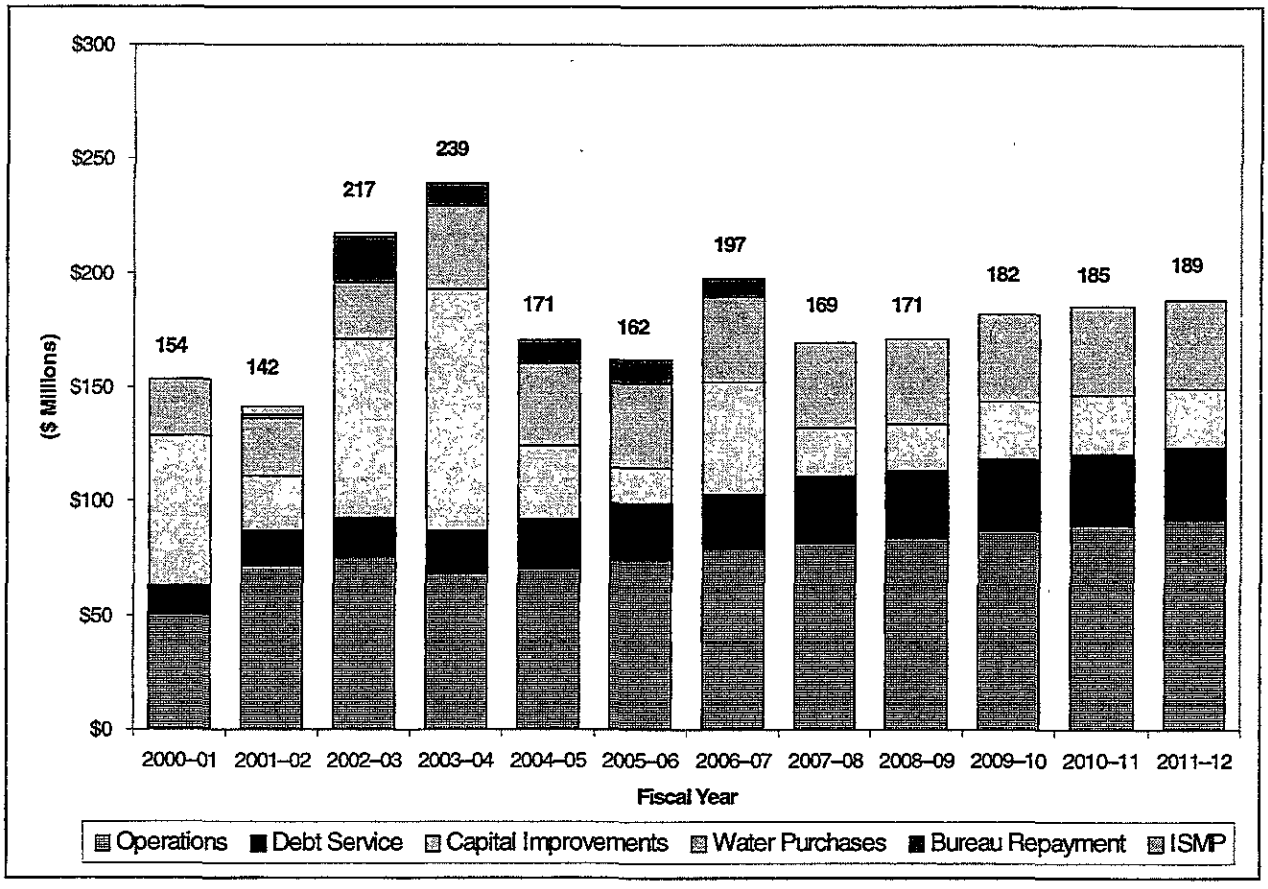
For FY 2002–03, Table 4-1 shows total requirements of $217.5 million to be met from a combination of current revenues, reserves, and debt. The adopted rates shown in Table 1-1 are projected to produce approximately $97.9 million in revenues from water usage. Property taxes are projected to be $15.4 million, and interest earnings and other revenue are projected to be $8.8 million for a total of $122.1 million. The table shows a net decrease in reserves of $15.4 million because planned additions to capital and operating reserves partially offset the $20 million reduction planned in the Bureau Repayment Reserve.

The Water Utility plans to use debt to raise $80.0 million in financing for the capital improvement plan. The District is currently working with a Financial Advisor to develop a finance plan to fund capital needs using a combination of short and long-term debt. For the next five years, the District will continue to use both reserves and debt in conjunction with increasing water rates to meet revenue requirements occasioned by capital improvements totaling $281 million (in inflated dollars) for the five fiscal years 2002–03 though 2006–07. This funding will be used to upgrade many treatment plant systems that are needed to support the process revisions planned as part of the Stage 1 and Stage 2 work. The updated CIP includes newly identified projects at Rinconada, involving the in-plant water system, filter systems, clearwell and reservoir.

OVERVIEW OF LONG-TERM CAPITAL AND OPERATING PLANS

To develop a rate structure that will support planned work, staff analyzes the immediate needs of the District as well as anticipated requirements in the years to come. The projected outlays for the next ten years (see Figure 4-1) include capital and operating costs for the water quality and water supply issues discussed in Section III. The continuing appropriations for the capital investment needed to comply with water quality regulations can be seen in the capital portion of the bars. Total expenditures leveled off in FY 2001–02 because of a temporary reduction in capital needs, while previous appropriations and borrowed funds are spent down. Large capital appropriations are planned for FY 2002–03 and FY 2003–04 to fund numerous construction contracts planned to begin in those years.

FIGURE 4-1
Ten-Year Program—Projected Expenditure



Projected payments to the Bureau of Reclamation for the District's share of the San Felipe Division of the CVP contribute to the magnitude of projected outlays for FY 2002–03 and four subsequent years. The timing of these payments depends on the terms of the final settlement and the Bureau of Reclamation's schedule to finalize accounting for water deliveries.

Annual operation expenditures are projected to increase in FY 2002–03 as the utility steps up its security program and implements new programs to manage water utility assets. Longer term, water treatment costs are projected to increase as the ozonation processes come on line at the completion of the Stage 2 construction. The long-term costs of electric power are a significant

uncertainty at the present time. For the next two years, price spikes are expected and are anticipated in our budgeting. If the state is successful in restoring stability to the electric power markets in California, future power costs may not be significantly higher than previously forecast.

LONG-TERM FUNDING APPROACH FOR THE WATER UTILITY

To provide for the financial needs projected for the next ten years requires a financial plan that combines current revenues (from water sales), revenue bond sales, reserves, and other sources to satisfy total expenses each year. The immediate challenge is to provide $281 million (in inflated dollars) for capital facilities and equipment between fiscal years 2002–03 and 2006–07; therefore, additional debt financing is planned each year through FY 2004–05 for future capital improvements. Table 4-2 below shows the funding sources for capital projects in fiscal years 2001–02 through 2006–07.

TABLE 4-2
Capital Improvement Projects Funding Sources
Fiscal Year 2001-02 Through 2006-07

(Millions of Dollars)

Water Utility Capital Improvement Projects $ Millions	01/02 Adjusted Budget	02/03 Budget Addendum	03/04 Projection	04/05 Projection	05/06 Projection	06/07 Projection
Funding Sources						
Current Revenue (i.e., operating income)	8.2				5.9	
Future Year's Capital Reserves	15.9				5.1	
Revenue Bond Proceeds/ Other Debt		80.0	107.8	36.3	4.5	59.1
Total Water Utility Capital Improvements Funded (Constant Dollars)	**24.1**	**78.7**	**102.5**	**30.0**	**14.1**	**43.7**
Total Water Utility Capital Improvements Funded (Inflated Dollars)	**24.1**	**78.7**	**105.6**	**31.9**	**15.5**	**49.2**

Figure 4-2 shows the water rate projections that in combination with bond financing will finance needs to FY 2011–12. Over a five-year period, North County M&I rates are projected to increase from $330 per AF in FY 2001–02 to $430 per AF in FY 2006–07, an average increase of 5.0 percent per year. The projected growth in South County M&I rates is from $130 per AF in FY 2002 to $200 per AF in FY 2006–07, an average increase of 9.0 percent per year.

A financing strategy that includes debt financing for meeting needs and to moderate year-to-year increases in water rates is included in the ten-year plan shown in Table 4-3. Table 4-3 shows the projected revenues, expenditures, and reserves over the next ten years based on proceeds from revenue bonds of $80 million dollars in FY 2002–03 and $107 million in FY 2003–04. This funding approach allows us to maintain adequate operating reserve levels. It also enables the District to build up its capital reserves for contingencies, such as needed capital expenditures prescribed by the Asset Management Plan.

Using debt financing means that the District will see debt service rise from $15 million in FY 2001–02 to over $24 million in FY 2006–07. This increase results from the addition of debt

service on anticipated bond issues partially offset by pay off on outstanding debt. At the end of FY 2001–02, the outstanding debt was $82 million. By FY 2006–07, only $57 million of the existing debt will remain. However, as old outstanding debt is paid off, new debt, in the amount of $282 million is anticipated to be issued during this time period. Rates are projected to continue to rise after FY 2004–05 because of major upgrades at the District's dams and reservoirs.

FIGURE 4-2
Ten-Year Rate Projection

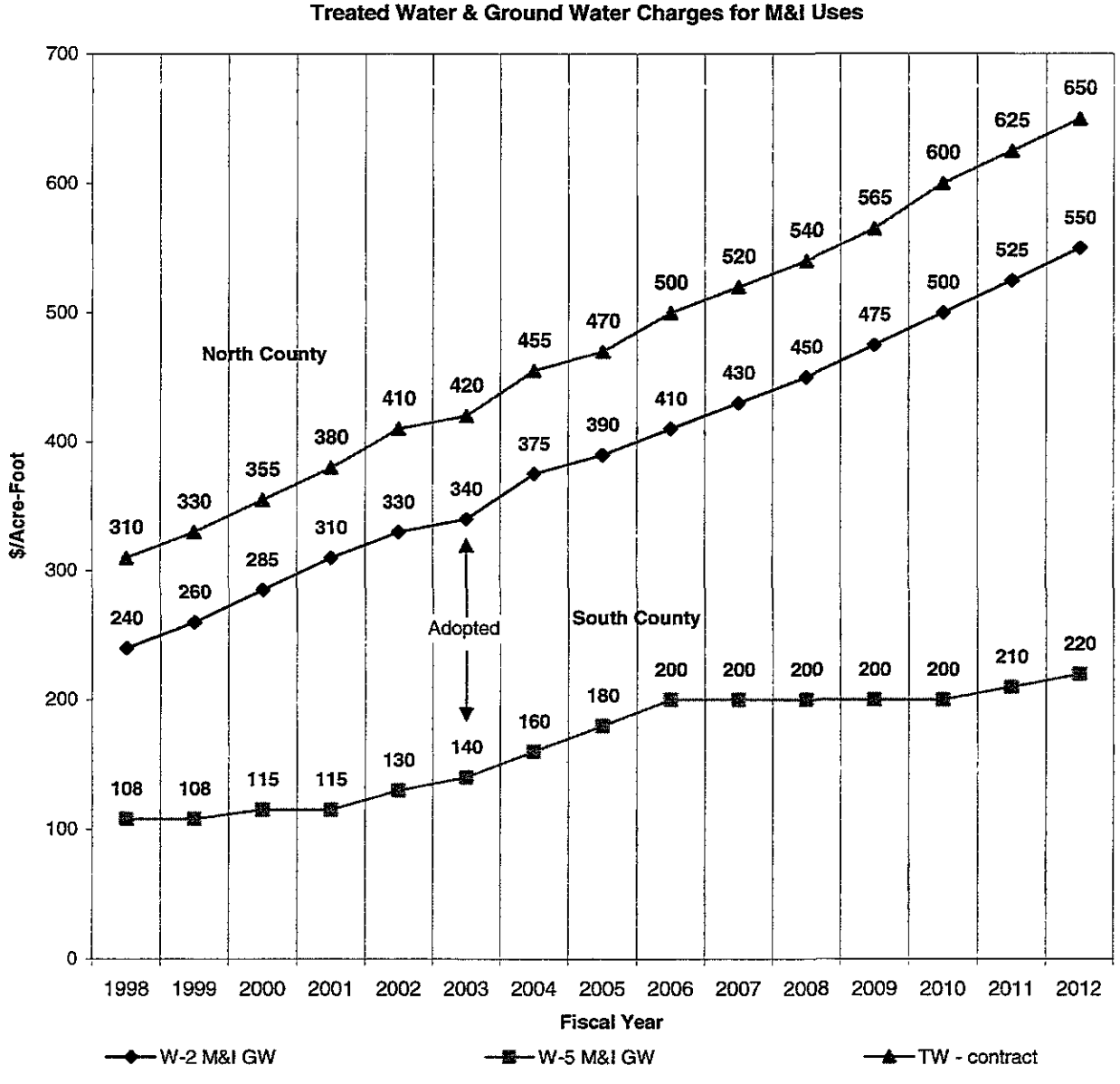


TABLE 4-3
Ten-Year Water Utility Plan

($ in Thousands)

(Fiscal Years)	Actuals	Adjusted Budget	Adopted Budget Addendum	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Revenue Sources:	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–2010	2010–11	2011–12
Groundwater Charges	$37,670	$40,966	$42,851	$48,314	$51,043	$54,183	$56,600	$58,197	$61,209	$64,260	$68,208	$71,456
Surface/reclaimed Water Sales	$918	$754	$774	$854	$906	$938	$978	$1,018	$1,069	$1,119	$1,173	$1,227
Treated Water Charges	$49,982	$52,680	$54,240	$59,350	$61,830	$67,040	$71,360	$76,270	$81,520	$88,200	$93,145	$96,970
Inter-governmental services	$2,310	$2,545	$2,733	$433	$443	$453	$464	$475	$486	$498	$509	$522
Total Operating Revenue	**$90,880**	**$96,945**	**$100,598**	$108,951	$114,222	$122,614	$129,402	$135,960	$144,284	$154,077	$163,035	$170,175
Non-Operating Income:												
Property Taxes	$14,447	$13,932	$15,433	$15,554	$15,687	$15,845	$15,162	$15,300	$15,442	$15,592	$15,746	$15,906
Interest	$15,367	$9,177	$5,865	$3,984	$4,008	$4,206	$3,317	$3,683	$3,317	$3,949	$3,498	$3,343
Capital Contributions	$902	$0	$0	$4,546	$3,577	$0	$0	$0	$0	$0	$0	$0
Other	$441	$5,806	$198	$198	$198	$198	$198	$198	$198	$198	$198	$198
Total Non-Operating Income	$31,158	$28,916	$21,496	$24,282	$23,470	$20,249	$18,677	$19,181	$18,957	$19,739	$19,442	$19,447
Total Revenue	**$122,038**	**$125,861**	**$122,094**	**$133,233**	**$137,692**	**$142,863**	**$148,079**	**$155,141**	**$163,241**	**$173,816**	**$182,477**	**$189,622**
Operating Outlays:												
Operations	$69,738	$89,396	$93,346	$100,599	$103,983	$108,369	$113,346	$116,631	$119,241	$122,046	$124,914	$127,799
Operating Projects	$5,355	$7,763	$6,776	$4,105	$2,993	$2,920	$2,893	$2,716	$2,679	$2,881	$2,842	$3,057
Debt Service	$12,337	$14,956	$16,893	$19,049	$21,681	$24,969	$24,154	$29,442	$29,436	$31,700	$31,696	$31,569
Total Operating Outlays	**$87,430**	**$112,115**	**$117,015**	**$123,753**	**$128,657**	**$136,258**	**$140,393**	**$148,789**	**$151,356**	**$156,627**	**$159,452**	**$162,425**
Excess (Deficit) Revenues vs Operating Outlays	$34,608	$13,746	$5,079	$9,480	$9,035	$6,605	$7,686	$6,352	$11,885	$17,189	$23,025	$27,197
Unreserved balance beginning of year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Balance Available for Capital and Reserves	**$34,608**	**$13,746**	**$5,079**	**$9,480**	**$9,035**	**$6,605**	**$7,686**	**$6,352**	**$11,885**	**$17,189**	**$23,025**	**$27,197**
Total Capital Appropriations	**$66,207**	**$24,102**	**$78,690**	**$105,592**	**$31,874**	**$15,510**	**$49,206**	**$20,700**	**$20,086**	**$25,178**	**$25,766**	**$26,095**
Other Financing Sources/ (Uses):												
Operating Transfers Out -ISMP	$0	($3,397)	($1,783)	$0	$0	$0	$0	$0	$0	$0	$0	$0
Revenue Bond Proceeds/Grants	$54,516	$0	$80,000	$108,539	$36,344	$0	$59,060	$0	$27,258	$0	$0	$0
Payment to Central Valley Project	$0	($2,000)	($20,000)	($10,000)	($10,000)	($10,000)	($7,883)	$0	$0	$0	$0	$0
Total Other Financing Sources/ (Uses)	**$54,516**	**($5,397)**	**$58,217**	**$96,539**	**$26,344**	**($10,000)**	**$51,177**	**$0**	**$27,258**	**$0**	**$0**	**$0**
Budget Balance Available	**22,917**	**(15,753)**	**(15,394)**	**427**	**3,505**	**(18,905)**	**9,657**	**(14,348)**	**19,057**	**(7,989)**	**(2,741)**	**1,102**
Projected Carryover												
Balance Available	**22,917**	**(15,753)**	**(15,394)**	**427**	**3,505**	**(18,905)**	**9,657**	**(14,348)**	**19,057**	**(7,989)**	**(2,741)**	**1,102**
Appropriated to/(from) Reserves:												
Operating Reserves:												
Contingency Appropriation	$1,000	$1,121	$1,170	$1,238	$1,287	$1,363	$1,404	$1,488	$1,514	$1,566	$1,595	$1,624
Working Capital Appropriation	$9,116	$9,343	$9,751	$10,313	$10,721	$11,355	$11,699	$12,399	$12,613	$13,052	$13,288	$13,535
Supplemental Water Supply Appropo.	$4,907	$4,907	$4,907	$4,907	$4,907	$4,907	$4,907	$4,907	$4,907	$4,907	$4,907	$4,907
Rate Stablization Reserve Fund	$1,500	$2,000	$3,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
San Felipe Appropriation	$2,740	$2,740	$2,740	$2,740	$2,740	$2,740	$2,740	$2,740	$2,740	$2,740	$2,740	$2,740
Environmental Water Account	$0	$3,362	$3,362	$3,362	$3,362	$3,362	$3,362	$3,362	$3,362	$3,362	$3,362	$3,362
Performance Efficiency	$6,616	$0	$0	$5,000	$5,000	$5,000	$11,129	$11,624	$11,935	$12,192	$12,493	$12,776
Total Operating Reserves	**$25,879**	**$23,473**	**$24,931**	**$31,560**	**$32,017**	**$32,727**	**$39,241**	**$40,520**	**$41,071**	**$41,820**	**$42,384**	**$42,945**
Capital Reserves:												
Replacement Appropriation	$0	$4,509	$4,509	$4,509	$4,509	$4,509	$4,509	$4,509	$4,509	$4,509	$4,509	$4,509
Designated for Future Years' Capital	$15,876	$21	$1,859	$6,966	$15,544	$10,399	$11,570	$5,797	$22,225	$15,567	$12,261	$12,802
Construction Reserves	$0	$0	$1,310	$0	$4,470	$0	$9,854	$0	$2,080	$0	$0	$0
Total Capital Reserves	**$15,876**	**$4,529**	**$7,677**	**$11,475**	**$24,522**	**$14,908**	**$25,932**	**$10,306**	**$28,813**	**$20,075**	**$16,770**	**$17,311**
Reserves for Contingent Liabilities:												
Bureau Repayment Appropriation	$59,883	$57,883	$37,883	$27,883	$17,883	$7,883	$0	$0	$0	$0	$0	$0
Total Reserves for Contingent Liabilities	**$59,883**	**$57,883**	**$37,883**	**$27,883**	**$17,883**	**$7,883**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Appropriated to /(from) Reserves	**$101,638**	**$85,885**	**$70,491**	**$70,917**	**$74,422**	**$55,517**	**$65,174**	**$50,826**	**$69,884**	**$61,895**	**$59,154**	**$60,255**

NORTH COUNTY (ZONE W-2) FINANCES

Water Charge Zone W-2, North County, accounts for approximately 80 percent of District water sales, but because of higher water rates, over 95 percent of the Water Utility's revenue. In May 1998, after discussions with the water retailers and other advisory groups, the District embarked on a plan to raise the groundwater charge for North County gradually to meet the projected financial requirements. Continuing the approach agreed to with its advisory groups, the Board adopted staff recommendations to increase the groundwater charge to $340 per AF for nonagricultural (M&I) water and $34.00 per AF for agricultural water for FY 2002–03 (see Table 1-1).

As shown in Table 4-4, total North County appropriations in FY 2002–03 are budgeted to increase by approximately $76.3 million from FY 2001–02 as a result of a $54 million increase for capital improvements and $18 million for the CVP Repayment.

TABLE 4-4
Overview of North County Finances

($ Millions)

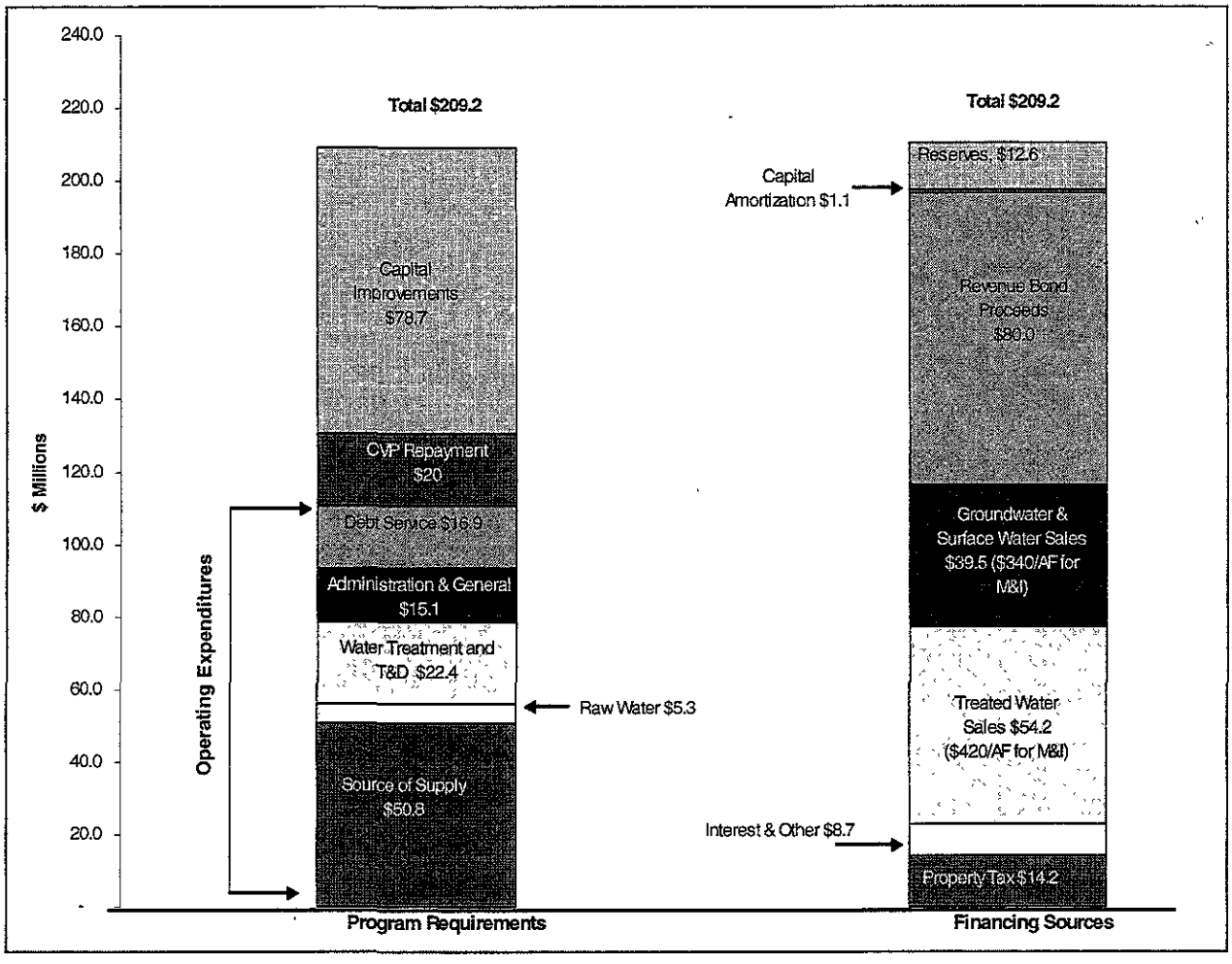
	Actual FY 2000–01	Estimated FY 2001–02	Budget FY 2002–03
Allocated Revenue	$117.51	$121.02	$116.67
Revenue Bonds	**$54.52**	**$0.00**	**$80.00**
Less Open Space Credit to South AG	($0.48)	($0.55)	($0.59)
Capital Amortization from South Co.	$0.56	$1.09	$1.09
Total Revenue	$172.10	$121.56	$197.17
Allocated Costs			
Operation	$59.85	$82.39	$86.92
Imported Water	$23.62	$24.49	$23.63
Capital Improvements	$66.21	$24.10	$78.69
CVP Repayment	$0.00	$2.00	$20.00
Total Costs	**$149.68**	**$132.99**	**$209.24**
North County Surplus (Deficit)	$22.42	($11.43)	($12.07)

The groundwater charges adopted by the Board for FY 2002–03 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

Figure 4-3 shows the relationship between expenditures and the projected sources of revenue in Zone W-2. The revenues from the groundwater rates are necessary to carry out the full scope of activities needed to achieve the Board of Director's Ends Policy 2.1: "There is a reliable supply of healthy, clean drinking water."

FIGURE 4-3
Fiscal Year 2002–03
North County Water Utility Program Requirements and Financing Sources

($Millions)



SOUTH COUNTY (ZONE W-5) FINANCES

Rates in the South County (Water Charge Zone W-5) are based on the costs of specific facilities, imported water costs, and operations costs related to managing the groundwater basin, ensuring water quality, and measuring water supplies and usage. Under current policies for managing the finances of South County, water rates are set to maintain an approximate balance between revenues and costs. The cumulative balance is tracked, and projected water charges are set to keep the cumulative balance near zero, while maintaining relative stability in South County water rates. Successive years of surplus or deficit can occur, but rates are adjusted only when the trend in the cumulative surplus or deficit shows a significant imbalance.

Current Board policy adds an "open space" credit to agricultural revenues. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural rates low. The credit to agricultural water users in a water charge zone amounts to the difference in revenue from agricultural water use charged at a rate equivalent to 10 percent of the zone's M&I rate and that which would be generated if the agricultural rate were 25 percent of the zone's M&I rate. A Board policy setting the agricultural water charge at one-tenth of the zone's M&I rate was instituted in July 1998 and formally incorporated into the pricing policy in Resolution No. 99-21 (see Appendix B). As shown in Table 4-5, the Open Space Credit received by the South County was $0.48 million in FY 2000–01, estimated at $0.55 million in FY 2001–02, and projected to be $0.59 million in FY 2002–03. As the M&I rates for both zones are projected to grow over the next ten years, the amount of the Open Space Credit available to support agricultural water revenues will continue to increase.

With the rates adopted for FY 2002–03, the South County deficit is estimated to be approximately $1.5 million (see Table 4-5). This would result in a cumulative deficit of $1.4 million at the end of FY 2002–03. The rate projection shown in Figure 4-2 is expected to produce an annual surplus in FY 2005–06 and to return to a cumulative surplus in FY 2011–12.

The quantity of imported water used in South County is expected to range between 9,000 AF and 12,000 AF annually; Table 4-5 shows the costs of imported water are expected to be lower in FY 2002–03, compared to FY 2000–01, because projected deliveries of CVP water are lower for FY 2002–03.

The operating costs in South County are projected to increase to cover additional maintenance on Reach 1 of the San Felipe Division, operation of the South County recycled water pipeline, and additional operation and maintenance costs for recharge facilities. The amount for capital amortization increased because of recent capital outlays for the construction of recycled water facilities under an agreement with the SCRWA.

In addition to the tasks directly related to conveying and recharging water for South County customers, the Water Enterprise also conducts programs to protect water quality in both surface and groundwater resources. Additional programs educate both agricultural and domestic customers about water conservation methods and provide direct assistance with water audits and implementation of water-saving technology.

The groundwater charges adopted by the Board for FY 2002–03 in Zone W-5 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

Figure 4-4 shows the relationship between expenditures and projected sources of revenue in South County (Zone W-5). The revenues from the groundwater rates are necessary to carry out the full scope of activities needed to achieve the Board of Director's Ends Policy 2.1: "There is a reliable supply of healthy, clean drinking water."

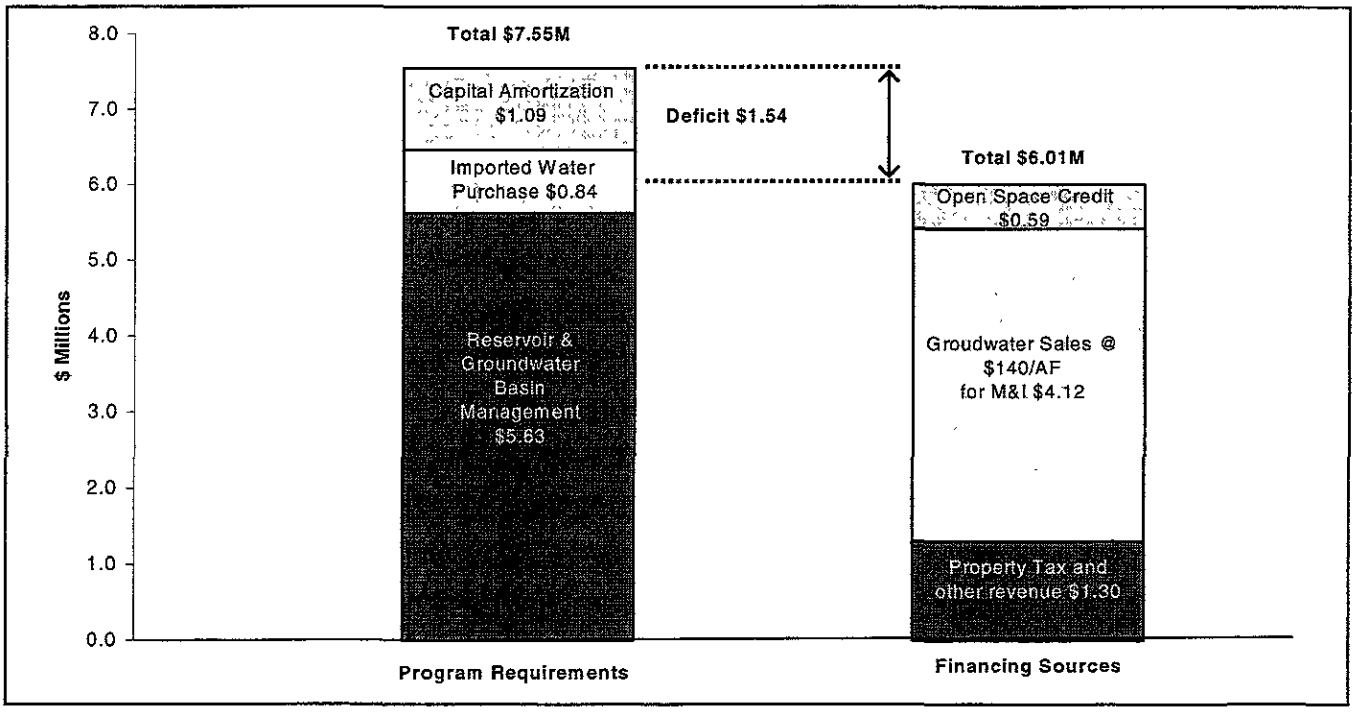
TABLE 4-5
Overview of South County Finances

($ Millions)

	Actual 2000–01	*Adjusted* 2001–02	*Budget* 2002–03
Allocated Revenue	$4.53	$4.84	$5.43
Received Open Space Credit from North County	$0.48	$0.55	$0.59
Allocated Costs			
Operation	$2.84	$4.39	$5.63
Imported Water	$1.11	$0.84	$0.84
Amortized Capital Improvements	$0.56	$1.09	$1.09
Total Cost	**$4.52**	**$6.32**	**$7.55**
Surplus (Deficit)	**$0.50**	**($0.93)**	**($1.54)**
Cumulative Balance	$1.03	$0.10	($1.44)

FIGURE 4-4
Fiscal Year 2002–03
South County Water Utility Program Requirements and Financing Sources

($ Millions)



APPENDIX A

WATER UTILITY RATE COMPONENTS AND ADOPTED RATES

TABLE A-1
Adopted Water Rate Components for Fiscal Year 2002–03

Component	Rate ($/AF)
Basic User, Zone W-2 (North County)	
Agricultural	34.00
Net Agricultural with Mobile Lab Rebate	31.50
M&I	340.00
Basic User, Zone W-5 (South County)	
Agricultural	14.00
Net Agricultural with Mobile Lab Rebate	11.50
M&I	140.00
Treated Water Surcharge	
Contract	80.00
Noncontract*	20.00
Water Master	11.75
Capital Cost Half Road Lateral System	2.75

***Note:** Treated water is provided in Zone W-2, the total charge adopted for contract treated water is the sum of $340 plus $80 or $420 per AF. Non-contract water will be available only from the Rinconada Water Treatment Plant in FY 2002–03, but non-contract deliveries will likely be limited during future construction periods.

TABLE A-2
Adopted Water Charges for Fiscal Year 2002–03

Type of Charge	AG Water ($/AF)	M&I Water ($/AF)
Groundwater		
Zone W-2	$34.00	$340.00
Zone W2 with Mobile Lab Rebate	$31.50	N/A
Zone W-5	$14.00	$140.00
Zone W5 with Mobile Lab Rebate	$11.50	N/A
Surface Water[1]		
Half Road Deliveries[2]	$28.50	$154.50
Other Zone W-5 Deliveries[3]	$25.75	$151.75
Other Zone W-2 Deliveries[4]	$45.75	$351.75
Minimum Charge Zone W-5[5]	$105.00	$105.00
Minimum Charge Zone W-2[6]	$255.00	$255.00
Stored Water		
Zone W-2	$34.00	$340.00
Zone W-5	$14.00	$140.00
Treated Water		
Contract[7]	N/A	$420.00
Noncontract[8]	N/A	$360.00
Recycled Water		
Gilroy	$20.00	$80.00

[1]Surface water charge is the sum of the basic user charge plus the water master charge. It also includes the capital cost and power, wherever applicable.

[2]Half Road = Basic User (AG or M&I @ $14 or $140) + Water Master ($11.75) + Capital ($2.75).

[3]Other Zone W-5 Deliveries = Basic User (AG or M&I @ $14 or $140.00) + Water Master ($11.75).

[4]Other Zone W-2 Deliveries = Basic User (AG or M&I @ $34.00 or $340.00) + Water Master ($11.75).

[5]Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $140.00).

[6]Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $340.00).

[7]Treated Water Charge is the sum of Basic User ($340.00) and Treated Water Surcharge ($80.00/AF).

[8]Treated Water charge for noncontract deliveries is offered to all treated water contractors in the Rinconada Water Treatment Plant service area for deliveries from that facility. The charge for non-contract deliveries is the sum of the basic user charge ($340.00) and the treated water surcharge for non-contract water ($20.00/AF).

APPENDIX B

DESCRIPTION OF WATER UTILITY REVENUE SOURCES, COST CENTERS, AND RESERVES

PRICING POLICY

The District's Board adopted Resolution No. 99-21 updating the Water Utility taxing and pricing policy in March 1999. This pricing policy incorporates four concepts: (1) water pooling, (2) water facilities cost pooling, (3) water resources management, and (4) revenue pooling. The complete policy follows after page B-4. The principal update to the policy in March 1999 was the Board's setting the agricultural water rate at 10 percent of the M&I rate in both Zones W-2 and W-5. Resolution No. 99-21 is included in this appendix.

WATER CHARGES

- Water charges include a **groundwater charge**, which is equivalent to the **basic user charge**, and is associated with the benefit of groundwater supplies. The groundwater charge is tax applied to water extracted from the groundwater basin in Zones W-2 and W-5, as shown in Appendix C. The basic user charge is applied to other types of water delivered by the District. There are two rates: one for agricultural water and one for M&I water.

- A **treated water surcharge**, which is associated with the benefit of receiving treated water, is levied in addition to the basic user charge on water delivered from the District's water treatment plants.

PROPERTY TAXES

Ad valorem taxes provide revenue to support several benefits which are general in nature serving all or large areas of the County. Some of these benefits are the availability of imported water to the County, recreation associated with the District's reservoirs, and replenishment of the County's groundwater subbasins.

The District receives a portion of the 1 percent countywide tax revenues as allocated by the County Assessor. Tax Zones W-3 and W-4, as well as a countywide ad valorem tax, are part of the 1 percent allocation.

The District also levies additional ad valorem taxes under Article XIII A of the State Constitution to meet: (a) prior approved general obligation bond debt service in Zone W-1 (zones are shown on the map in Appendix C) and (b) part of the contractual obligations for State Water Project State of California water with a countywide tax.

DEBT FINANCING

To fund the construction of new facilities, the District has relied on both pay-as-you-go financing and long-term debt financing from revenue bonds as authorized by the voters in 1977. The last remaining 1977 authorized revenue bonds were sold in April 1984. In January 1984, State Legislation allowed the District to seek authorization to issue revenue bonds as needed following the Board's approval. County voters approved this authorization in November 1984. The District sold an additional $30 million of revenue bonds in November 1985 to provide needed funding for ongoing projects. In August

1986, the District refunded all outstanding water revenue bonds. Again, in June 1994, the District took advantage of favorable market conditions to refund the remaining 1986 water revenue bonds. The 1994 refunding totaled $65.9 million at an effective interest rate of 5.2 percent. In December 2000, the District issued tax-exempt and taxable bonds in the amount totaling $60.3 million.

WATER UTILITY RESERVES

There are thirteen reserves designated in the Water Utility Enterprise Fund. Policies and procedures for fund balance reserves, as approved by the District Board of Directors in 2001 can be found on page B-6.

WATER UTILITY ZONES

The major sources of water revenue are from charges levied on all groundwater extracted within Zone W-2 and Zone W-5 of the District and from the sale of approximately 110,000 AF of treated water. Other water charges are made for surface water diversions and sales of recycled water in the Gilroy area. A brief description of each water zone (see Water Utility Zones map in Appendix C) within the Water Utility Enterprise follows:

Zone W-1: Encompasses the groundwater basin in the northern County and small peripheral areas outside the groundwater basin, with the retail service areas of privately-owned public utilities and municipal water departments using water pumped from the groundwater basin. This area provides the security for general obligation bonds. Zone W-1 comprises an area of approximately 290 square miles and includes all or portions of 13 of the County's 15 cities, plus some unincorporated territory.

Zone W-2: Encompasses the Santa Clara Valley groundwater basin north of Metcalf Road. It includes those groundwater producing facilities that benefit from recharge of the basin with local and imported water. A charge is levied for all groundwater extracted from this zone.

Zone W-3: Encompasses the Coyote and Llagas groundwater basins in the area from Metcalf Road in the north to just south of the City of Morgan Hill. Part of the County property tax within the 1 percent limit is allocated to this zone.

Zone W-4: Contains all of Zone W-2 and lands outside Zone W-2 that use or otherwise benefit from locally conserved water and from the importation and distribution of water from the South Bay Aqueduct. This area also receives an allocation of County taxes. These tax revenues are used to pay for the cost of water, recovery of accumulated overdrafts, control of land surface subsidence, and to sustain the emergency supply of water.

Zone W-5: Is comprised of the entire groundwater basin from Metcalf Road south to the Pajaro River. Charges are levied for all groundwater extracted from this zone.

Zone W-6: Represents the old Gavilan Water Conservation District and is within Zone W-5.

WATER UTILITY COST CENTERS

Source of Supply Cost Center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply and includes all District conservation, recycling, and importation costs.

Raw Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.

Water Treatment Cost Center contains all expenditures associated with the treatment of water at the Rinconada Water Treatment Plant, Penitencia Water Treatment Plant, and Santa Teresa Water Treatment Plant.

Treated Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.

Administration and General Cost Center contains all expenditures of an administrative nature, which are not assigned to one of the other four cost centers. Work performed in this cost center covers items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water quality management and resource planning.

RESOLUTION 99-21

RESOLUTION NO. 99- 21

ADOPTING "WATER UTILITY TAXING AND PRICING POLICY" AND RESCINDING RESOLUTION NO. 96-82

WHEREAS, the Santa Clara Valley Water District (District) adopted a District mission, goals and objectives on February 19, 1985, in order to conduct a sound water management program that serves the community; and

WHEREAS, the District Act authorizes the District to enter into water sales contracts and to levy and collect taxes and assessments on property within the District and in the respective zones of the District and sets forth requirements for groundwater charges and rates between agricultural and nonagricultural water; and

WHEREAS, several Board resolutions, as identified in Exhibit "A," are related to the management of water resources and the implementation of this water taxing and pricing policy; and

WHEREAS, several changes which affect revenue sources and benefit distribution have occurred since adoption of Resolution No. 96-82. These changes include: (1) passage of Resolution Nos. 98-44 and 98-45 setting agricultural charges for groundwater and surface water at 10 percent of the nonagricultural charges; (2) revisions to the policy governing sale of noncontract water in 1998; (3) pending completion of an agreement to act as the wholesaler to deliver recycled water in South County.

BE IT RESOLVED, by the Board of Directors of the District as follows:

1. **The policy of the District in the areas of taxation and water pricing for water utility revenues shall be and is hereby adopted**:

Policy Statement

The intent of this water utility taxing and pricing policy is to provide revenue for the management of water resources and operation of the water utility enterprise. This policy establishes a framework for establishing a system of water charges as permitted by the District Act to meet revenue requirements and to allocate costs amongst the beneficiaries. The general approach is to charge the recipients of the various benefits for the benefits received from the District's comprehensive water utility program.

The consumptive and nonconsumptive benefits provided by District water supply facilities and operations are listed and described below:

- Provision of a water supply and effective management of water resources available to the community from a variety of sources of supply, transmission, and water treatment facilities operated by the District.
- Protection of water quality through the purification and treatment of water and the protection of water supplies.
- Stewardship of watersheds and riparian corridor.
- Administration of related programs and projects such as recycled water and water conservation administered solely by the District or in partnership with another organization.

- Ancillary flood protection.
- Recreation, such as fishing, boating, picnicking, hiking, and other related recreation activities.
- Support for the economic well being of the community.
- Protection of the community infrastructure from subsidence.

2. Policy Implementation

The following water taxing and pricing concepts and framework shall be implemented in order to provide for revenue in order to continue providing direct and ancillary benefits to the customers of the District and the community of Santa Clara County.

Water Taxing and Pricing Concepts

- ***Water Pooling***: Water is considered to be a single commodity irrespective of the water's source or cost. It is a single commodity whether it is from water provided locally, imported, or recycled, and all users benefit from the availability of multiple sources of water.
- ***Water Facilities Cost Pooling***: All water supply facilities contribute to the common benefit of effective water resources management. In general, the water charges and property taxes are based on the common benefits of the capital and operations outlays, rather than reference to named facilities, with the exception of the liability for bonded indebtedness which is applied to each zone of benefit.
- ***Water Resources Management***: Water supplies are managed, through taxing and pricing, to obtain the effective utilization of the water resources of the District to the advantage of the present and future populations of the County. This concept provides for development of taxing and pricing structures that will achieve the effective use of available resources and conserve supplies for potential drought conditions.
- ***Revenue Pooling***: For the most part, water utility revenues are collected in a common fund and not designated for a specific cost. Such revenues are available for the general capital and operating outlays of the water utility enterprise. Some revenues such as certain property taxes are specifically designated for debt service and the fixed costs of the State Water Project, and are not available to the common fund. Water charges are established to provide the revenues that are required in the common fund for general capital and operating outlays and that are over and above revenues from ad valorem taxes, interest, and miscellaneous sources. This provides flexibility in managing continuing operations and funding capital outlays.

Water Taxing and Pricing Framework

The following procedures are intended as a general framework to guide staff in the development of a water rate structure implementing this policy:

- ***Zones of Benefit***: Zones of benefit are to be identified and established in accordance with the District Act. Groundwater charges and property taxes are levied for the benefits received by the water users and property owners benefitting from that zone. For each zone, a basic

water user charge is determined for current groundwater and raw surface water users to be applied to the quantities of water used or consumed.

- ***Basic Water Charge Zones***: The objective of establishing various water charge zones is to recover costs for the benefits resulting from conservation, import, and recharge of water which occur only within that zone. Water charges are levied for water producing operations, such as groundwater pumping and raw surface water diversion. In addition, users may be subject to specific charges that meet special needs of a group of users, such as water master charges for surface water deliveries, a capital charge for equipment or facilities, and power costs for pumping.

- ***Treated Water Surcharge***: A treated water surcharge shall be added to the basic water charge for the price of treated surface water delivered by the District. The charge is to be established at an amount that would promote the effective use of available water resources. The charge may differ between treatment plants to better manage regional variations in groundwater conditions.

- ***Costs for Specific Benefits***: Whenever costs associated with specific benefits are clearly and easily measurable, those costs shall be charged to the beneficiaries, in accordance with their specific zones of benefit. Where there is a question as to the identity of the beneficiary or the method of measuring the benefit, the allocation of costs should remain flexible and be determined in accordance with accepted practices and sound judgements based on the four water pricing concepts. The District recognizes and supports the State Legislature's limitation imposed on the District that rates for agricultural water shall not exceed one-fourth of the rate for all water other than agricultural water. In order to encourage the continuance of agricultural use of land in the County, to encourage the preservation of open space, to defer intensification of users and to further support the limitation imposed by the State Legislature, it is the District's policy that rates for agricultural water shall not exceed one-tenth the rate for all water other than agricultural water.

  Both water charges and property taxes are used to recover costs incurred for the benefit of current water users. The costs for future supply sources can be recovered using current revenues or through project specific long-term financing.

- ***Balancing Costs***: The District recognizes that there may be imbalances between revenues and costs within a zone of benefit from year to year. The District will strive to achieve balance over the long-term in accordance with the District Act and to properly charge recipients for the benefits received.

- ***Incentives***: Incentives in the form of subsidies may be provided in order to reduce the price of specific sources of water in order to optimize use of available or future water resources.

- ***Recycled Water***: From time to time, the District may enter into agreements to provide wholesale delivery or other services related to recycled water. The District will strive to recover the costs of these facilities consistent with the pooling concepts outlined above, while adhering to the specifics of any agreement.

3. Executive and Staff Limitations

District staff are authorized to develop a water rate structure which meets the objectives set forth herein, in accordance with the District Act, and using the concepts set forth above. The District's rate structure is implemented only by resolutions approved by the Board of Directors.

Staff is authorized to recommend water charges for consideration by the Board in accordance with the District Act. Water charges, if any, shall be recommended by staff each year be at fixed and uniform rates for agricultural water and for all water other than agricultural water, respectively, except that each such rate for agricultural water shall be one-tenth of the rate for all water other than agricultural water. The Board has determined that agricultural use of lands is of value to the County and the state, and that agricultural lands provide an open space benefit. The Board's limiting staff to a recommendation of agricultural water rates below the maximum allowed by the District Act will benefit water users Countywide, and is necessary to carry out the policies of the State Legislature and the District Board of Directors.

Staff is authorized to prepare, for the Board's consideration, resolutions for the collection of property taxes as needed and authorized under applicable laws.

4. Previous Policy Rescinded

The "Water Taxing and Pricing Policy," adopted by Resolution No. 96-82, is hereby rescinded.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District on March 16, 1999 by the following vote:

AYES: Directors Gross, Zlotnick, Judge, Kamei, Sanchez, Estremera, Wilson

NOES: Directors None

ABSENT: Directors None

SANTA CLARA VALLEY WATER DISTRICT

By: _____
Chair/Board of Directors

ATTEST: LAUREN L. KELLER

_____
Clerk/Board of Directors

EXHIBIT "A"

SANTA CLARA VALLEY WATER DISTRICT
BOARD RESOLUTIONS USED AS A BASIS FOR
WATER TAXING AND PRICING POLICY

Resolution 68-4 to govern the management of its water supply and water facilities so as to equalize the availability of water throughout the District by every means available to it to the fullest extent consistent with equity and sound conservation principles; and

Resolution 71-19 adopting "Water Taxing and Pricing Policy;" and

Resolution 74-28 adopting rules and regulations for the service of surface water and establishing a fee and charge structure; and

Resolution 79-87 providing for water importation tax credits and repealing prior resolution which was adopted November 23, 1964.

Resolution 81-44 declaring policy regarding payment of in-county credit for ensuing fiscal years and that no unit rate is provided for the in-county credit and no payments made from and after fiscal year 1983-1984.

Resolution 90-73 adopting and authorizing the filing and implementation of the Santa Clara Valley Water District Urban Water Management Plan which provides for water conservation efforts which are funded by the District.

SANTA CLARA VALLEY WATER DISTRICT

POLICIES AND PROCEDURES

FINANCIAL SERVICES

FUND BALANCE RESERVES INDEX

Santa Clara Valley Water District
POLICIES AND PROCEDURES
Financial Services

FUND BALANCE RESERVES
Index

OVERVIEW
- Introduction
- Purpose
- General Policies

OPERATING RESERVES
- Contingency Appropriations
- Working Capital Reserves
- Performance Efficiency and Accountability Program Reserves
- Designated for Contracts and Purchases
- Investment Valuation Reserve
- Water Enterprise Operating Reserves

CAPITAL RESERVES
- Fixed Asset Reserve
- Designated for Current Authorized Projects
- Designated for Future Years Capitals

DEBT SERVICE RESERVES

FUNDED AND CONTINGENT LIABILITIES
- Water Enterprise – Bureau Repayment Appropriation
- Self-Insurance Appropriation

Santa Clara Valley Water District
POLICIES AND PROCEDURES
Financial Services

FUND BALANCE RESERVES

OVERVIEW

Introduction

The following Fund Reserves Policy is established in accordance with the Board's Executive Limitation, EL-1.4.3, "With respect to the actual, ongoing financial condition and activities, the CEO/GM shall not cause or allow the development of fiscal jeopardy or a material deviation of actual expenditures from Board priorities established in Ends policies." "Further, without limiting the scope of the foregoing by this enumeration, he or she shall not use any unappropriated long-term reserves or undesignated fund balance."

Based on the CEO's interpretation of the above policy, District Fund Balance Reserve policies and procedures have been developed and outlined herein.

The objective of this policy is to ensure the provision of adequate reserves and to provide guidance for the appropriate accumulation and use of District Reserve Funds. In addition to this policy, both long-term goals and short-term objectives will influence and direct the allocation of annual operating funds for the various reserves. The District classifies reserves as either Operating, Capital, Debt Service, or Funded and Contingent Liabilities.

Purpose

Fund Reserves represent a portion of fund balance that is segregated for a specific future use, or is not available for appropriation or expenditure. Adequate reserve levels are a necessary component of the District's overall financial management strategy and a key factor in external agencies' measurement of the District's financial strength.

General Policies

This policy establishes the purpose and use of such reserve funds, as well as the procedures for funding and maintaining reserves.

- Each budget year, the District shall establish reserve appropriations necessary to meet its legal covenants, set aside cash to pay expenses prior to the receipt of tax revenues, provide for prudent funding of operating contingencies and contingent liabilities, and sustain its capital improvement program.

- There are four categories of reserves: Operating, Capital, Debt Service, and Funded and Contingent Liabilities.

- Reserves are to be fully funded each budget year, or staff will establish an intermediate and long-term funding plan for the reserve as part of the budget process.

- Reserve funds will not be spent for any function other than the specific purpose of the reserve from which they are drawn, without explicit Board approval for the exception. All appropriations from reserve accounts require Board-approval.

- Debt Service Reserves are administered by debt trustees and set at levels established by loan covenants.

- All remaining reserves shall be reviewed each year by staff to determine reserve level requirement recommendations within guidelines established by this interpretation of Board policy.

OPERATING RESERVES

Contingency Appropriations

The fund balance reserves designated for operating contingencies are established at a fixed amount at the beginning of each fiscal year to provide for unforeseen needs, revenue shortfalls, and emergency appropriations during the year.

Fund	Fund Reserve Levels
Water Enterprise Fund	1% of Budgeted Operating Outlays
District General Fund	.5% of Budgeted Operating Outlays
Other Funds • Lower Peninsula Watershed • West Valley Watershed • Guadalupe Watershed • Coyote Watershed • Uvas/Llagas Watershed • Clean Safe Creeks Fund • Watershed & Stream Stewardship • Equipment Service Fund • Risk Insurance Funds	1.3% of Budgeted Operating Outlays per Each Fund.

Working Capital Reserves

The Working Capital Reserve provides for available cash assets from which operating and capital expenditures are temporarily financed prior to the receipts of revenues for the fiscal year.

Fund	Fund Reserve Levels
Water Enterprise Fund	One month (1/12) of budgeted operating outlays
District General Fund**	1/2 of estimated property tax revenues
General Fund sub-fund ** • Watershed & Stream Stewardship Fund **Watershed Funds** • Lower Peninsula Watershed • West Valley Watershed • Guadalupe Watershed • Coyote Watershed • Uvas/Llagas Watershed • Clean Safe Creeks Fund	1/2 of budgeted operating outlays

* This *Working Capital* operating reserve fund is required under the Water Utility System Master Resolution (Resolution No. 94-58 and the Second Supplemental Resolution No. 2000-64.)

** The Watershed and Stream Stewardship Fund is a subfund of the General Fund, however the Working Capital Reserves for this fund will be maintained in accordance with Watershed Fund requirements due to its related nature and purpose.

Performance Efficiency and Accountability Program Reserves

The Performance Efficiency and Accountability Program (PEAP) reserves provide funding for pilot or special one-time projects, studies, or activities.

The PEAP Reserves are funded by the remaining balance of revenues and expenditures appropriated to restore other reserves and contingencies to their authorized amounts at year-end. The reserve level should not exceed 10% of the prior year's operating expenditures excluding debt service.

Reserved for Encumbrances

Outstanding encumbered purchases, contracts, and other commitments for which the District bears an obligation are recorded as liabilities. These reservation of Fund Balance and Fund Equity represent funds set aside to ensure payment of the District's liabilities. The reserve's balances are adjusted annually to reflect total obligations at year-end.

Water Enterprise Operating Reserves

The following reserves have been established at contractual or recommended levels appropriate to the specific purpose of each reserve:

Reserve	Purpose	Fund Reserve Levels
Supplemental Water Supply Appropriation	Provides funding for supplemental water purchases, participation in water banking or conservation opportunities, and other water supply needs.	Not to exceed $11 million which represents the highest annual amount expended for supplemental water supply needs.
Rate Stabilization Reserve	Reserve established to both 1) mitigate fluctuations in water rates by providing funding during periods of extraordinary operating expense or water revenue shortfalls, and 2) to supplement District revenues to meet debt service coverage requirements. Per bond covenants, transfers from the Rate Stabilization Reserve are to be used to pay operation and maintenance costs in order to offset extraordinary expenses and revenue shortfalls, and to supplement District revenues to meet Debt Service Coverage requirements, upon Board approval.	Budgeted reserve levels correlate to annual debt service. The reserve minimum is budgeted to not less than 10% of annual debt service due on all Parity Obligations. This amount may be transferred each year to the Water Enterprise Fund for purposes of calculating the net Water Utility System revenues needed to meet the rate covenant in the Water Utility System Master Resolution, as amended (Second Supplemental Resolution No. 2000-64).
San Felipe Appropriations	Contractually stipulated operating reserves established pursuant to the District's 1977 Agreement (No. A0315) and the 1986 Agreement (No. A0770) with the U.S. Bureau of Reclamation (USBR), for the operation and maintenance of the San Felipe Division of the Central Valley Project. Facility expenditures from the reserve appropriations are restricted to meeting unforeseen extraordinary costs.	The following minimum reserve levels are maintained for each of the three San Felipe Reaches, in accordance with the Bureau of Reclamation contract: • San Felipe Reach 1-$1,000,000* • San Felipe Reach 2-$ 500,000 • San Felipe Reach 3-$ 250,000 ** Reach 1 Reserve is jointly maintained with San Benito County Water District.* The maximum amount of this reserve should not exceed $10 million.
Environmental Water Banking Reserve	Established by Board action on February 6, 2001 to receive any revenues generated by the Agreement Between the Department of Water Resources of the State of California, Santa Clara Valley Water District and Kern County Water Agency for 2001 Water Resources for Support of the Environmental Water Account Under the CALFED Program. (Agreement #A2438W) and other funds which may in the future be allocated by the Board. This reserve provides a secure mechanism to make sure funds are available to meet financial obligations generated by the agreement and to offset future capital and operating expenses related to the District's water banking activities.	The reserve is funded by revenues and/or other funding sources received in excess of costs, to a maximum balance set by Board action of $15 million.

CAPITAL RESERVES

Fixed Asset Reserves

The purpose of this reserve is to accrue funding for asset purchases and replacement in the period of use. Through this funding reservation, monies are set aside for planned future asset expenditures within specified categories. In addition, this reserve provides a funding source for unanticipated asset needs, mitigates the impact of large budget expenditures, and assists with asset management and long-range planning.

Reserves are designated within three asset categories: Equipment, Vehicles, and Facilities. The Fixed Asset Reserves do not include reserves for dam and pipeline infrastructure or flood control improvements as these assets are generally funded through debt issues.

An amount equal to annual depreciation in each of the three fixed asset categories is designated to the asset reserves as Fund Balance or Fund Equity is available. Funding in excess of annual depreciation may also be accrued to make up for prior unmet reserve funding. Fixed Asset Reserve levels are not to exceed the total accumulated depreciation balance applicable to each asset category.

Use of this fund is restricted to appropriations for asset replacement and purchases as needed, under the adopted budget and through Board approved budget adjustments.

Designated for Current Authorized Projects

This reserve provides for the funding of remaining authorized capital appropriations as of the close of the fiscal year. Capital Projects operate on a multi-year basis; hence all amounts approved but unspent on currently active Capital Projects may carry forward (with the exclusion of unspent labor and benefits) in this reserve until the projects are complete.

Reserve balances are adjusted annually to reflect total obligations at year-end.

Designated for Future Years Capital

This reserve is provided within each District fund in support of future capital needs, as projected in the District's 5-year Capital Improvement Plan.

For the Clean, Safe Creeks Program Fund, the remainder of both operating and capital revenues not otherwise re-appropriated to restore the fund's operating reserves to their authorized amounts, are appropriated to this reserve for use in financing projects on a pay-as-you-go basis.

For all other funds, Future Years Capital Reserve balance is the accumulated remainder of revenues not otherwise re-appropriated to restore all capital reserves and contingencies to their authorized amounts.

DEBT SERVICE RESERVES

Debt Service Reserves

Debt Service Reserves are to provide a reservation of funds for current debt service payment on outstanding debt.

Reserves are established in accordance with Bond or Certificate of Participation (COP) resolutions and initially funded from proceeds of the issuance. Each Debt Service Reserve Fund is required to be maintained in accordance with resolution mandates.

Debt Service Reserves are held and administered by the issuance trustee, to be used for payment of the principal and interest in the event that on any payment date the fiscal agent does not receive sufficient installment payments from the District for such purpose.

FUNDED AND CONTINGENT LIABILITIES

Funded and Contingent Liabilities

These reserve funds are established at recommended levels appropriate to each reserve for the purpose of discharging a future contingent liability.

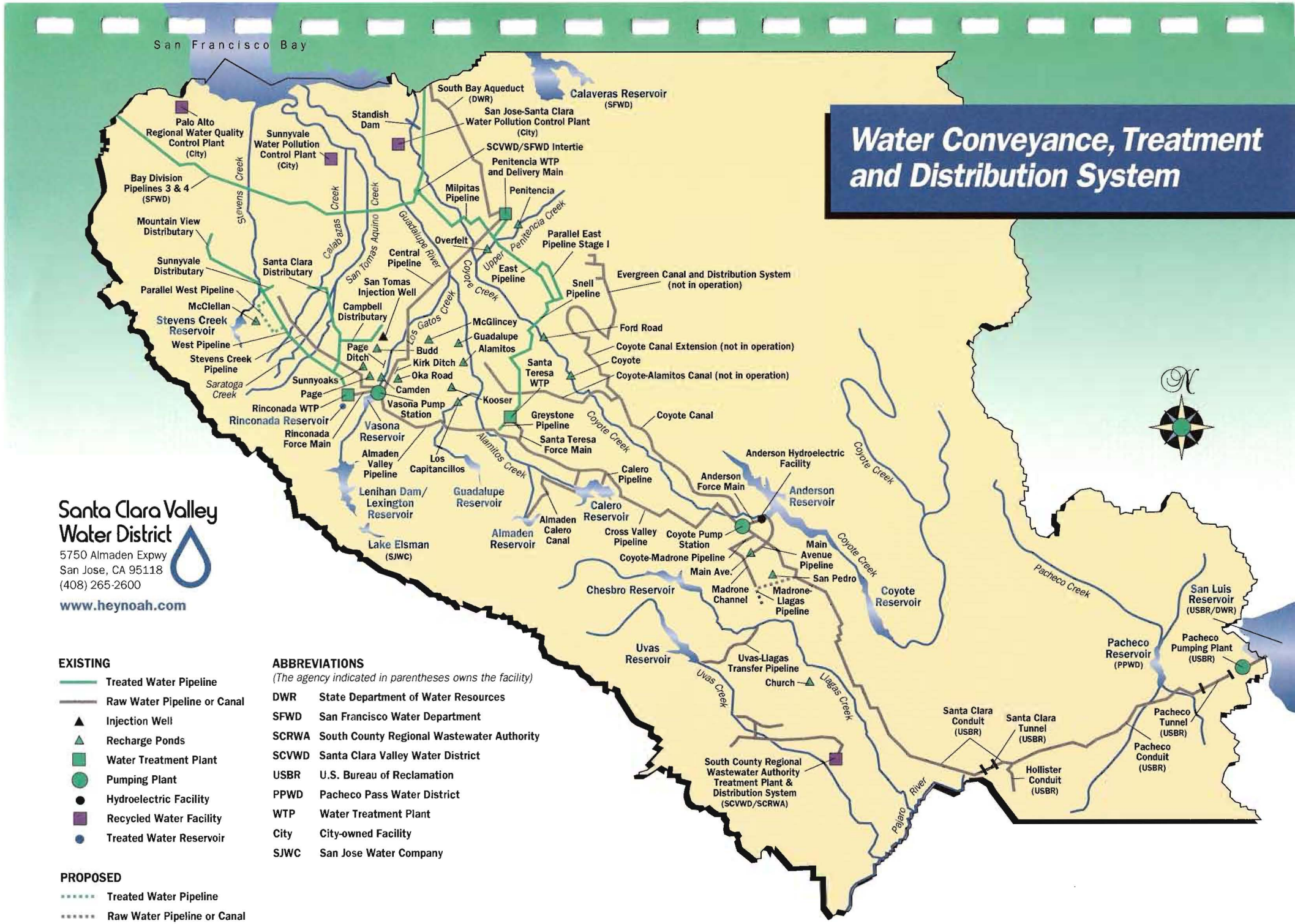
The contingency reserve funds defined below are ongoing contingency reserves.

Water Enterprise Contingent Liability	Purpose	Contingency Reserve Levels
U.S. Bureau of Reclamation: CVP Repayment Appropriation	Established by Board policy to provide funding for the District's possible future contractual liability to the U.S. Bureau of Reclamation for the Central Valley Project water rate increase obligations.	Reserve appropriation levels are established by authorized appropriations under the adopted budget. Amount is set based on the estimated deficit accrued from water purchase contract.

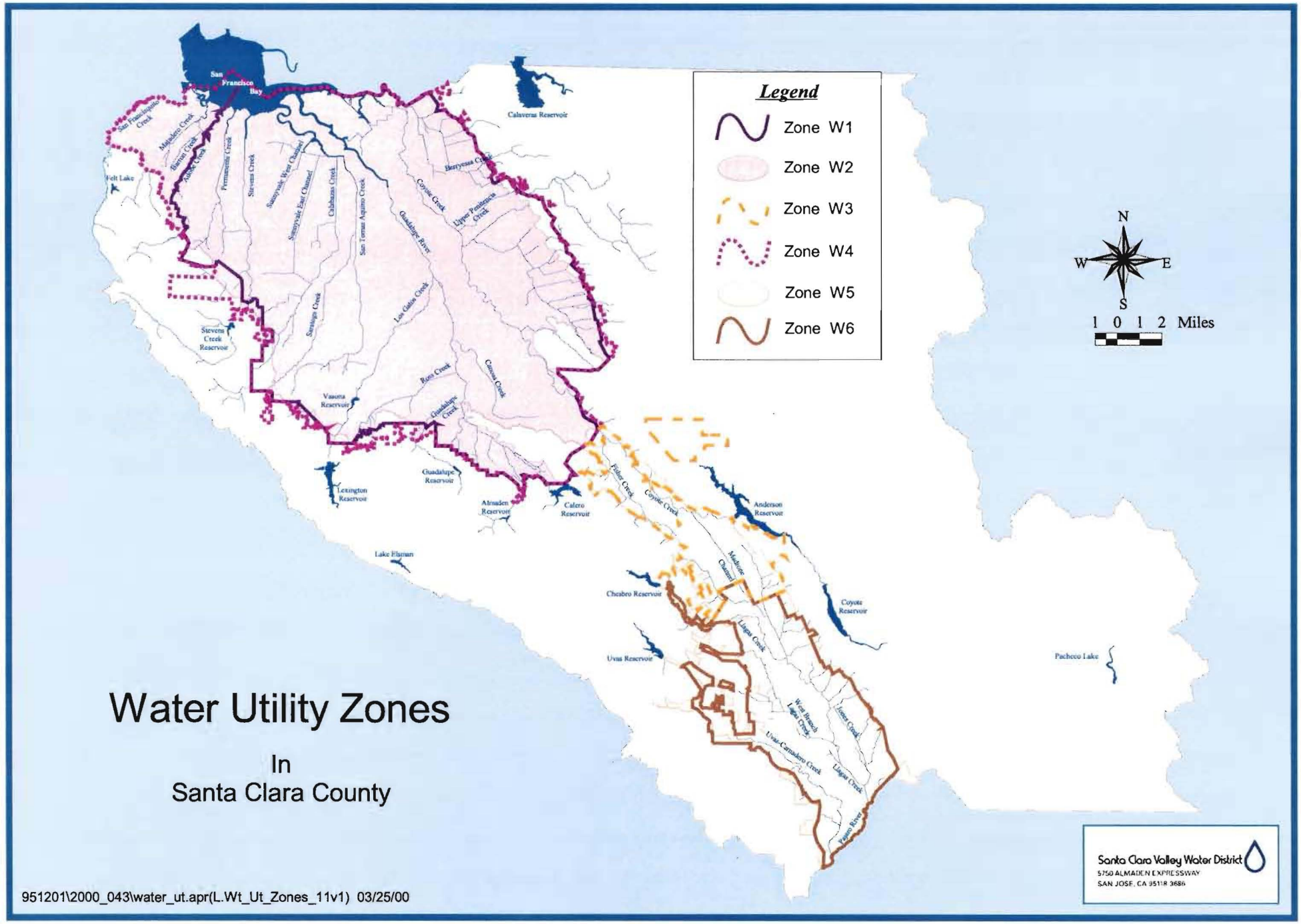
Risk Insurance Appropriations	Purpose	Contingency Reserve Levels
a. General Liability	Established by Board policy to fund the contingent liability for the District's self-insured portion of general liability and property damage claims. General Liability commercial insurance coverage is purchased for claims exceeding $2 million.	Reserve appropriation amounts are determined through an independent actuarial evaluation. Current reserve levels are established under a 95% confidence level, to include payment on both incurred but not paid and incurred but not reported claims.
b. Worker's Compensation	Established by Board policy to fund the contingent liability for the District's self-insured portion of worker's compensation claims. Workers' Compensation commercial insurance coverage is purchased for claims exceeding $250,000.	Reserve appropriation levels are determined through an independent actuarial evaluation. Current reserve levels are established under a 95% confidence level, to include payment on both incurred but not paid and incurred but not reported claims.
c. Catastrophic Loss	Established by Board policy to fund the District's self-insured contingent liabilities for non-insured claims.	Reserve appropriation levels are established by authorized appropriations under the adopted budget, with a target reserve level of $5 million dollars.

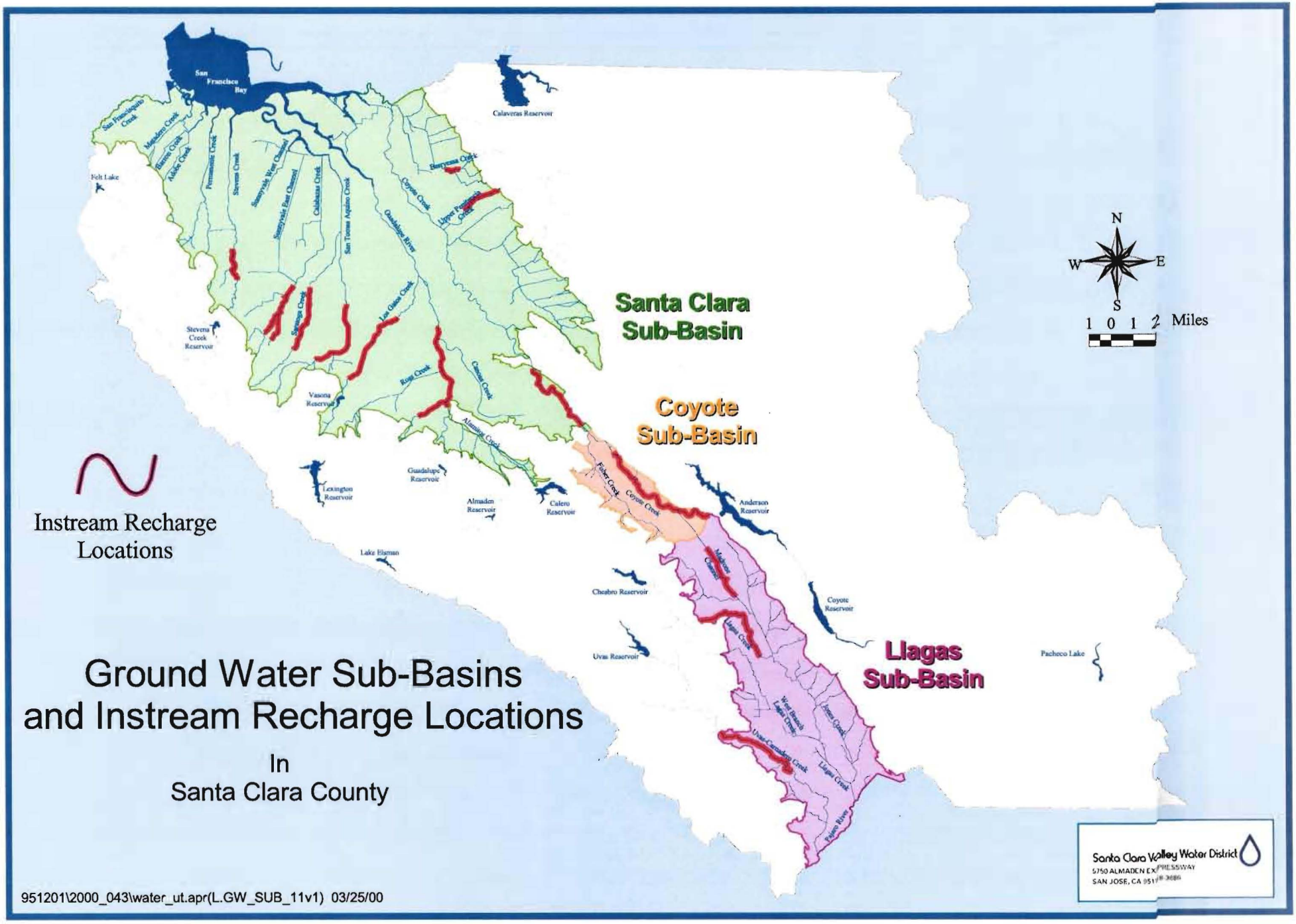
APPENDIX C

MAPS



Printed on recycled paper using soy-based inks. Updated April 2001, 5K, YD


Legend
Zone W1
Zone W2
Zone W3
Zone W4
Zone W5
Zone W6
N
W
E
S
1 0 1 2 Miles
San Francisco Bay
Calaveras Reservoir
Felt Lake
Stevens Creek Reservoir
Vasona Reservoir
Lexington Reservoir
Guadalupe Reservoir
Almaden Reservoir
Calero Reservoir
Lake Elsman
Anderson Reservoir
Chesbro Reservoir
Coyote Reservoir
Uvas Reservoir
Pacheco Lake
Water Utility Zones
In
Santa Clara County
Santa Clara Valley Water District
5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686
951201\2000_043\water_ut.apr(L.Wt_Ut_Zones_11v1) 03/25/00


Santa Clara Sub-Basin
Coyote Sub-Basin
Llagas Sub-Basin
Instream Recharge Locations
Ground Water Sub-Basins and Instream Recharge Locations
In
Santa Clara County
N
W
E
S
1 0 1 2 Miles
San Francisco Bay
Calaveras Reservoir
Felt Lake
Stevens Creek Reservoir
Vasona Reservoir
Lexington Reservoir
Guadalupe Reservoir
Almaden Reservoir
Calero Reservoir
Lake Elsman
Anderson Reservoir
Cherry Reservoir
Coyote Reservoir
Uvas Reservoir
Pacheco Lake
Santa Clara Valley Water District
5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686
951201\2000_043\water_ut.apr(L.GW_SUB_11v1) 03/25/00